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ABSTRACT

An expanded analysis of factors related to sex-role stereotyping in New York State (which were identified in phase 1) was conducted in the second (final) phase of the project. (See Note for report on phase 1.) Data were collected by surveying occupational education students--generally 11th and 12th graders--in selected programs in the trade, industrial, and service areas; 10th graders in general high school courses; parents; teachers; and counselors. Tenth grade survey results indicated that 33% of boys and 55% of girls considered (although few actually planned to take) nontraditional courses, and ways to encourage nontraditional course choice differed for girls and boys. Surveys of occupational education students showed that fathers were more helpful to boys than girls in traditionally male programs, and students perceived parents' sex-stereotyped attitudes toward programs. Counselor and teacher survey findings indicated all but one of forty-six teachers were in fields traditional for their sexes, most teachers and counselors had not attended sex-equity workshops, 90% felt boys and girls should be encouraged to take nontraditional courses, and a positive association existed between a teacher's personal efforts to increase nontraditional enrollment and presence of nontraditional students in the instructor's classes. (Survey instruments are appended.) (YLB)

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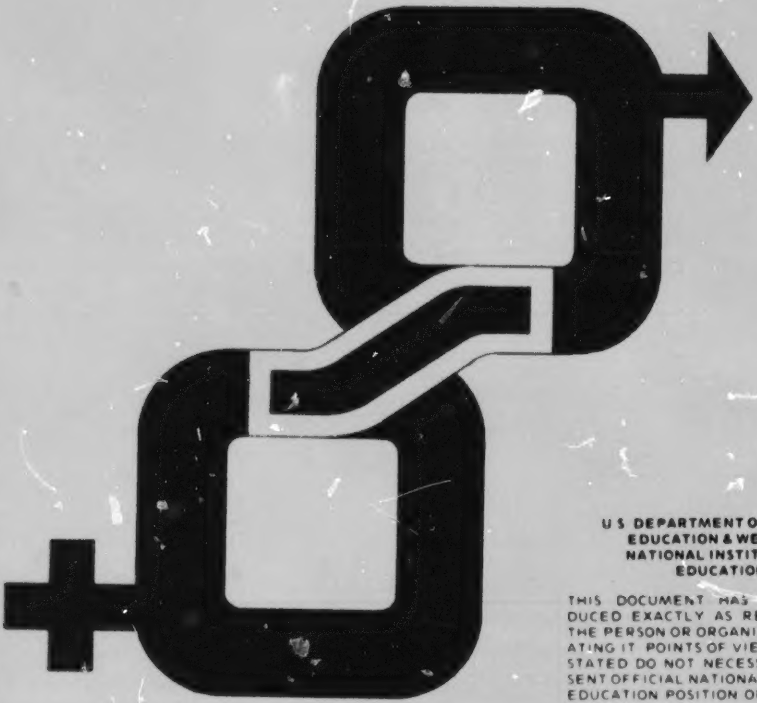
The Identification of Factors Associated with Sex-role Stereotyping in Occupational Education



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EXPANDING OPPORTUNITIES

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INTRODUCTION

This project sought to identify factors associated with fostering or overcoming sex-role stereotyping in secondary occupational education programs in New York State. In particular, we were interested in those factors associated with sex-role stereotyping that have potential for change through appropriate affirmative action.

The first phase of the project began in March 1978. In phase 1, appropriate research procedures were developed and tested. Results of phase 1 were reported in December 1978 (Ott, 1978), and an annotated bibliography was produced (Russ, 1978).

The second phase began in December 1978 and continued through December 1979. Phase 2 involved an expanded analysis of factors related to sex-role stereotyping in occupational education in New York State. Data were collected from two groups of students: occupational education students (generally 11th and 12th graders, a few 9th and 10th graders) currently enrolled in selected programs in the Trade, Industrial and Service area, and tenth grade students in general high school courses. Data were also obtained from parents, teachers and counselors of these students.

This report presents a review of literature (Chapter I); an explanation of research procedures (Chapter II) and analyses of results of the tenth grade surveys (Chapter III); occupational education surveys (Chapter IV) and surveys of teachers and counselors (Chapter VI). The analysis of each set of surveys is summarized by a series of findings. The intervening section (Chapter V) contrasts expectations about job opportunities with State projections for occupations of interest mentioned in the surveys. Finally, Chaper VII presents a series of recommendations based on the findings of the study.

CHAPTER I

REVIEW OF RESEARCH

Sex-Stereotyping and Occupational Education

During the past decade, both the popular and research literatures have focused attention on the problems accompanying the widespread practice of mechanically assigning societal roles to individuals on the basis of their sex. This practice is commonly called sex-role stereotyping. Most of these writings have emphasized the negative effects of stereotyping on both males and females.

There is considerable evidence that by the time children enter school, they have already acquired stereotyped attitudes about "appropriate" behaviors for males and females through the training they have received from their parents. Parents describe their newborn infants in different terms depending upon the sex of the child (Rubin, Provenzano & Luria, 1974), give them different toys to play with (Denzin, 1970) and assign them different types of household tasks (Lynch, 1975).

These early attitudes and roles are perpetuated and reinforced through the students' subsequent school experiences. For example, Levy (1972), in her review of research literature on the school's role in elaborating and reinforcing sex roles, finds that as children grow older their awareness of "appropriate" sex-role behavior increases and becomes more restricted and stereotyped. Further, she states that the schools' expectations for girls confirm the traditional sex-role behaviors of obedience, docility and dependence. For boys, the message is mixed: they are encouraged to develop behaviors typical of the masculine sex-role (aggressive, active, achieving, independent) while simultaneously displaying the qualities of the "good pupil" (passive, quiet, conforming). Textbooks and educational materials used in the schools have come under heavy criticism for sex bias. For example, females are typically portrayed in stories as passive, fearful or incompetent while males are shown as active, brave or resourceful (Stacey, Bereaud & Daniels, 1974). Later the use of career guidance materials that categorize occupations as "male" or "female" or maintain separate scoring keys for each sex reinforces the segregation of the sexes observed in many occupations.

Other writers document the lack of adequate, occupational role models for young women (Verheyden-Hilliard, 1975; Mitchell, 1977) or differential treatment of male and female students by teachers in the schools (Spaulding, 1963). Consequently, it is not surprising to find that by the time they are in high school, young men and women differ in their anticipated occupational choices and levels of aspiration. Marini (1978) in reviewing the research on adolescent aspirations reports the general conclusions that adolescent boys aspire to a higher level of education than girls and that the planned occupational choices of the two sexes are highly sex-stereotyped. In addition, a variety of variables, including socioeconomic status, parental encouragement, peer aspirations and mother's employment, is assigned importance by researchers in influencing these choices.

Mitchell (1977) in interviewing high school girls about their attitudes toward vocational education found that, while these young women believe that occupational opportunities for women are becoming wider, in practice they still limit their own choices to stereotypic occupations such as nursing, secretarial positions and teaching. Like the majority of studies on sex-stereotyping in occupational choices, this study emphasizes the limiting effects of stereotypic attitudes and beliefs on the career plans of young women.

It is in vocational education that the influence of sex-role stereotyping can be most easily observed, in the program and career choices of both males and females. According to enrollment data for 1978-1979, although females composed 61 percent of all students enrolled in vocational education, they were disproportionately represented in programs such as health (91% female), occupational home economics (78% female), and office and business (74% female). Similarly, males formed a substantial majority in program areas like technical (83% male) and trade and industry (77% male). Table 1 reports the sex distribution for the main areas in vocational education.

Table 1

Enrollments in Vocational Education
by Program Area, 1978-1979

Program	Total Size	Female	Male
Agriculture	10,946	22.8%	77.2%
Distribution	19,238	53.4	46.6
Health	12,284	91.3	8.7
Home Economics (Occupational)	6,852	77.9	22.1
Office and Business	259,393	74.2	25.8
Technical	7,989	16.8	83.2
Trade and Industry	79,643	23.1	76.9
Total	396,345	61.0	39.0

Source: New York State Education Department, Division of Occupational Education Planning, Research and Evaluation.

More recent data from a survey conducted by the National Organization for Women's Project on Equal Education Rights (PEER, 1979) shows that, across the country, women now total 11 percent of students in traditionally male vocational education programs. The highest-ranking state, Michigan reported enrollments that are 20 percent female while Delaware, in last place, had a 1.8 percent female enrollment. New York State ranked twenty-first with 9.96 percent female students in traditionally male courses. The study pointed out that since the passage of Title IX in 1972, female enrollments had changed only slightly, increasing 5 percent during the seven-year period.

This evidence of occupational sex-stereotyping has stimulated special concern for expanding career options for women. Norwood (1978) points out that today's young women face "a changing labor market, new work patterns for women, a decrease in family size, an increasing number of female-headed families, and the greater likelihood of full time rather than part-time employment." Although women are now likely to work for longer periods of time and are more likely to be the sole source of support for a family, the majority of women are still employed in the traditional female occupations, clerical and service jobs. Since these areas are generally lower, both in pay and status than occupational areas dominated by males, the continued concentration of women in a restricted number of occupations carries enormous economic and social implications.

Federal legislation now mandates equal access to vocational education for men and women. Title IX of the 1972 Educational Amendments prohibits discrimination on the basis of sex in all federally funded educational institutions. More recent legislation, the 1976 Amendments to the Vocational Education Act of 1963, requires that each state provide a detailed description of policies it will follow and actions it will take to overcome sex discrimination and sex-stereotyping in state and local vocational education programs. These measures also include provisions for incentives to encourage enrollments in non-traditional programs and for development of model programs to reduce occupational sex-stereotyping.

Non-school Influences on Career and Program Choice

In order to assist students to consider a wide range of career options when making decisions about educational programs, it is helpful to know more about the process of making such decisions. Answers to questions such as "What factors are important in choosing an occupational program?" or "Who or what is influential in the selection of a non-traditional occupation?" can provide invaluable help to teachers, counselors and others who work with students.

Although researchers have long been interested in examining how individuals choose a career or occupation, it is only in the past decade that special attention has been devoted to the career plans of individuals who choose an occupation that is not traditional for their sex. Since most of the major theories and literature related to general career process have centered upon the occupational decisions of males, researchers such as Psathas (1968) and Zytowski (1969) have called attention to the special conditions that they believe affect women's choices. These conditions include sex role, plans for marriage and family, husband's attitudes and a variety of characteristics of family background. While some individual research studies have begun to investigate the career decisions of women as part of general career decision-making theory, other, more numerous studies, have focused specifically on women's decisions to pursue nontraditional careers. Most of this research has concentrated on women's decisions to pursue high status or professional occupations requiring post-secondary education. Although few studies have investigated the choices of students at the secondary level or those who aspire to nonprofessional careers, some of the findings from the literature that have implications for the present research are described below.

FAMILY BACKGROUND

Numerous studies have examined family background factors that relate to the career plans of students. Studies relating to educational and occupational aspirations document the differential effects of socioeconomic background variables on boys and girls. This research reports that father's and mother's education and father's occupation are positively related to the educational and occupational aspirations of boys (Sewell & Shah, 1968; Marini & Greenberger, 1978). Girls from families of higher socioeconomic status also aspire to higher educational attainment (Marini & Greenberger, 1978). However, since girls generally aspired to a narrow range of less prestigious "female" occupations, the research related to girls' occupational aspirations shows weaker relationships. Consequently, recent studies have concentrated on variables that may have special importance for women, particularly in regard to the choice of career areas that are non-traditional for their sex.

One group of studies focus on women who plan relatively continuous participation in the labor force, or women who are "career committed" as opposed to home and family oriented. The narrowness of these studies has its base in a pervasive myth about women and work--the Cinderella syndrome. In spite of the growing evidence that women are continuing to work outside the home after marriage and children, a young woman frequently continues to believe that she will only work for a short time until the Prince comes along to marry her and both live happily ever after. As a result, to counter this myth, researchers have focused on the unusual or atypical woman--the individual who views work as a central feature of her adult life.

For example, Almquist and Angrist (1970) studied the family influences on career-oriented women college students who choose male-dominated occupations. They conclude that the non-traditional, career-oriented woman was more likely to have a mother employed outside the home and to report the influence of an occupational role model. Thus, these women have models, their mothers and others, of a successful combination of marriage and career. The influence of mothers' employment on the career choices of their daughters was also noted by Tangri (1969, 1972). She found that although in most cases neither parent's education related to the selection of a non-traditional career by their male or female children, maternal employment was related to the likelihood of a daughter working in a high-status occupation. In another study, Klemmack and Edwards (1973) discovered that a mother's employment status was related to a daughter's occupational interest, although it did not predict choice of typically male or female jobs.

One study (Kane, Frazee & Dee, 1976) examined the choices of students in post-secondary vocational training programs. Women were classified as enrolled in traditional (75% - 100% female), non-tradition (0 - 25% female) or mixed programs, based upon the number of women enrolled in these programs across the country. The analysis of the responses of 1,924 women differed from the studies of four-year college women in that no significant differences were found between traditional and non-traditional women in such family background characteristics as parental occupation, education, race or income. However, non-traditional women were more likely to live in urban areas and be older than traditional women.

The only study (Lewis & Kaltreider, 1976) that investigated influences on the choice of a non-traditional vocational program at the secondary level does not detail separate analyses for family background characteristics. However, when any family background variable that had shown a significant relationship with traditional or non-traditional choices was included with other variables in multiple regression analyses of influences on choice of non-traditional programs by male and female students, no significant relationships were found. Only two variables were significant for current and former students when the effects of these other variables were held constant: males in non-traditional curricula were more likely to be non-white, and non-traditional females were more likely to be enrolled in vocational rather than comprehensive high schools. Other variables relating to the family environment were compared for students selecting traditional and non-traditional programs. Students and their parents provided information on the toys that the students played with as children and the household tasks they usually performed. Male and female students definitely reported stereotypic choices of toys and tasks as children. However, these early behaviors were not related to their later choices of traditional and non-traditional programs within each sex group.

PARENTAL ATTITUDES

In addition to the family background factors described above are the more direct roles that parents play in influencing the children's educational and occupational choices, such as parental opinions about appropriate sex roles and their encouragement or discouragement of a child's career plans. Mitchell (1977) in a study of the attitudes of secondary school girls toward vocational education concluded that parents were the single most influential factor in the career decisions of the girls interviewed. However, the type and direction of this influence were not discussed by the researchers. Other data presented indicated that while these students believed that occupational opportunities for women were broadening, most were considering stereotypically female careers for themselves.

Research studies that examine the career choices of both traditional and non-traditional students also support the importance of parental influence. Kane, Frazee and Dee (1976) in their study of women in post-secondary vocational education programs found that mothers were mentioned most frequently as influencing decisions by both traditional and non-traditional women. In general, non-traditional women were less likely than traditional women to consider any family member or friend important in their selection of training; for example, 73 percent of traditional women named mothers as important compared to 50 percent of non-traditional women. Fathers were less frequently mentioned, but again were rated as more influential by traditional students (56%) than by non-traditional students (44%). After examining these data in relation to the parents' educational and occupational characteristics the authors conclude that

> parents apparently provide support and encouragement, but do not actually participate in the decision of whether their daughters pursue non-traditional or traditional occupations. Parents, it would appear, influence their daughters by stimulating their daughters' interest in occupational areas in which the parents themselves were educated and/or employed (p. 47).

However, it was noted that some parents not only influenced their daughters but actively discouraged them from their choices. This discouragement was particularly reported by non-traditional women: they reported that 9 percent of fathers had discouraged their selection of non-traditional training, a rate more than twice that reported by traditional women.

Lewis and Kaltreider (1976) also found that parents were the most frequent source of suggestions about vocational programs and the most frequently named as influential in course selection. This research on secondary school students did not distinguish the separate influence of mothers and fathers. The overall level of parental influence on student decisions, however, was lower than that reported by Kane, Frazee and Dee, approximately one in five students naming parents as the most important influence. The largest number, nearly one-half of both traditional and non-traditional students, felt that no one had influenced them and three-quarters of the students reported no opposition or resistance to their choice. Separate surveys of the students' parents suggested that students are more likely to choose non-traditional courses when their parents encourage the choice. Most parents reported that they were satisfied (43%) or very satisfied (45%) with their child's choice of occupational area regardless of whether the curricula were traditional or non-traditional.

PEER INFLUENCES

Studies of adolescents frequently discuss the importance of peer influences on activities and decisions of adolescents or examine the relative influence of peers and parents. Simpson (1962) finds that parental influence is more strongly related than peer influence to high-status occupations among boys. Other research by Musgrove (1963) and Goodman (1969) asserts the importance of parents as influences on their children. Other literature, however, suggests that influence may vary with circumstances. Thus, while Floyd and South (1972) indicate that in general peer orientation among boys and girls increases until about tenth grade, Brittain (1969) states that parents or peers may influence adolescents in different areas, depending on their apparent competence to guide. During the early high school years young persons are more strongly oriented toward peer conformity in those areas where social values are changing rapidly and where choices bear immediate consequences.

If young persons are more susceptible to peer influence in areas of rapid social change, it is likely that peers will be influential in an individual's decision to choose a non-traditional career. Lewis and Kaltreider (1976) as part of their study of secondary school students in vocational programs asked students if they had encountered any resistance or criticism concerning their program choices. Among those who had experienced resistance, both non-traditional males and females named male friends as the source of criticism. Nearly one-third of the students in non-traditional programs also reported that they had been teased about their choice of course by other students. On the positive side, when asked to cite experiences that influenced their choices of vocational course, both traditional and non-traditional students named personal discussions with parents and other students as the most important factors, outranking all school-initiated activities as well as hobbies and work experience.

Trigg and Perlman (1976) hypothesized that attitudes of others significant to the individual, particularly male friends, would be influential in a woman's decision to enter a non-traditional career. They employed a sample of post-secondary women students planning to enter the health professions to examine the premise that social factors are related to the choice of a high-status, non-traditional career. They found that women preparing for non-traditional health fields as compared with traditional women consistently felt their parents, women in general and their male friends were more supportive of non-traditional career choices. Traditional women, in contrast, generally perceived their parents as having less favorable attitudes toward any type of career.

School Influences on Career and Program Choice

Recent vocational education legislation has charged the educational system with eliminating sex discrimination. Yet research evidence indicates that while schools do not overtly discourage students from enrolling in non-traditional occupational programs, they frequently do not encourage them. For example, Kane (1978) notes that:

> In making the choice between traditional and non-traditional vocational education programs, women face strong stereotypes and a variety of societal expectations. Thus, women in non-traditional vocational education programs need considerable support to prevent such stereotypes from making them question their ability to succeed in their chosen traditionally male field. Black women may need special support to bolster their self confidence (p. 34).

TEACHERS

Farris (1978) reviewed the literature concerning the influence that teachers have on students' behavior. She noted that the education of vocational teachers has itself been marked by subtle transmittal of traditional sex-role expectations. Dittman (1977) surveyed vocational teachers, counselors and administrators in North Dakota about their views of male and female sex roles. She discovered that these vocational educators held stereotyped attitudes about other males and females even though they saw their own roles as significantly less stereotyped. Numerous other studies have confirmed that teachers ascribe different characteristics to boys and girls and prefer certain types of behavior in boys and girls.

Actual behavior in the classroom is also sex-linked. Teachers tend to believe that they treat students of different sexes either equally or without preference (Sears & Feldman, 1966; Levy, 1973). Considerable research, however, shows that teachers treat male and female students differently, rewarding and disciplining boys and girls for different behaviors; for example, these findings are generally supported by the previously described study by Lewis and Kaltreider (1976). Teachers in secondary-level vocational education classes did not actively discriminate against non-traditional students although they were affected by many of the long-held beliefs about sex-role behaviors. Most teachers made no active efforts either to recruit students into non-traditional programs or to overcome problems experienced by non-traditional students. Moreover, they were unaware that students were experiencing any problems.

Evidence from research indicates that parents and immediate family members are regarded by students as more influential in the choice of a non-traditional career (see page 34) than are school personnel. At the secondary school level, only 9 percent of non-traditional females and 4 percent of non-traditional males reported that a teacher had the most influence on their choice of program (Lewis & Kaltreider, 1976). Among post-secondary female vocational students, school personnel were mentioned as important in the students' choices only half as often as members of the immediate family (Kane, Frazee & Dee, 1976). However, among non-traditional students who considered school personnel of importance in their decisions, male post-secondary school teachers were most frequently named. When the educational personnel were asked a similar question, that is, about their perception of who encourages women to enter non-traditional training, there was a notable lack of correspondence with the responses of students. The educators thought that school personnel were more influential than non-school persons. They believed that counselors were more influential than teachers and that female school personnel were more influential than male personnel. The researchers noted that for each of the relationships cited as influential by students, educators' perceptions were reversed, signifying a lack of perception on the part of school personnel concerning influences on non-traditional students.

COUNSELORS

Within the educational institution, counselors occupy a strategic position relative to encouraging (or possibly discouraging) student interest in non-traditional careers. Like teachers, counselors have been found to hold stereotypic attitudes about male and female roles and to respond differently to male and female students. For example, a variety of studies has explored sex bias in counseling. These studies (Thomas & Stewart, 1971; Pietrofesa & Schlossberg, 1971) report that counselors show disapproval or negative bias toward women students with "deviate" or non-traditional career plans.

In contrast, however, the evidence concerning actual counselor influence in the plans and aspirations of students is less clear. Several studies provide conflicting opinions on the amount or kind of influence exerted by counselors. In a study of two-year college women, Moore and Veres (1976, 1979) found that career-innovative women report less contact with counselors. Although these non-traditional women report more problems in both personal and academic areas than women with traditional career choices, they are significantly less likely to have met with a counselor during the school year. These findings suggest that counselors may have less opportunity to be of any assistance to non-traditional women. Hence, the finding that counselors do not rank highly as reported sources of influence on career choice may also reflect this lack of contact. Lewis and Kaltreider (1976) similarly find little evidence of counselor influence in the selection of a non-traditional vocational course among secondary level students. In this study, after themselves, the non-traditional students cite parents as the greatest influence in their choice; only 16.2 percent of these students thought counselors had any influence on their choice.

However, Lewis and Kaltreider did find some limited evidence of sex bias. Counselors differentially support traditional or non-traditional career choices of students. In comparison to other students, traditional females in the study ranked counselors third (after self and parents) as the person having the greatest influence on their vocational course choice. The authors cite this finding as support for the idea that counselors are likely to reinforce traditional female occupational goals. In addition, these researchers interviewed counselors and concluded that counselors neither openly discourage nor encourage students with regard to non-traditional careers.

On the positive side of the influence issue, the Lewis and Kaltreider study found that among school personnel counselors were the group most aware of issues of sexism and its limiting effects on young persons.

Mitchell (1977) in interviews with adolescent girls also notes an area of positive counselor influence. Among the girls interviewed, counselors were overwhelmingly cited as the most important source in the school of information relevant to women.

The literature also describes an investigation of the counseling methods used with women students. Kane (1978) reports that female students in secondary vocational training programs do not feel that individual counseling is useful to them in making career decisions. This study examined various counseling methods used to assist students with decision making or to provide support for non-traditional enrollments. Fewer than 27 percent of the students thought individual counseling, vocational testing or group counseling to be of value in their decision-making. In fact, each of these counseling techniques was felt to be "not useful" by some students, the numbers ranging from 25 to 75 percent of the non-traditional enrollees. On the other hand, educational personnel did not find any counseling technique to be "not useful"; all thought individual counseling to be most useful for students. Kane concludes that "the counseling techniques which receive the most emphasis and widespread use in the schools are those which the students seem to find least satisfactory" (p.34).

Chapter II

RESEARCH PROCEDURES

This chapter discusses the design of surveys, the analysis of enrollments, and the selection of the programs and the schools that were included in the surveys.

Survey Design

Data were collected in Phase 2 by means of a set of eight surveys that were developed at the Cornell Institute for Occupational Education (CIOE). The surveys included both multiple choice and open-ended questions. One survey was developed for each of the following groups: occupational education students, their parents, teachers and counselors, and tenth grade general curriculum students, their parents, teachers and counselors. The surveys were designed after analyzing data generated in the first phase of the project. Surveys included modifications of some questions used in the first phase and new questions covering areas not explored there.

The surveys of occupational education students, their parents, teachers and counselors were field-tested at the area vocational school, Tompkins-Seneca-Tioga BOCES[1], and the surveys of tenth grade general curriculum students, their parents, teachers and counselors were field-tested at Ithaca High School. The field tests resulted in changes that improved the readability of the surveys. In addition, the surveys were reviewed and approved by personnel of the Bureau of Educational Data Systems of the New York State Education Department. Copies of final parent and student surveys are appended to this report.[2]

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[1] "BOCES" are Boards of Cooperative Education Services.

[2] Survey instruments may be used by other researchers if credit is given to the first author and to CIOE.

Surveys were pre-coded to indicate the school of the respondent. In addition, parents' surveys and their childrens' surveys were pre-coded with the same identification number, to allow comparison of responses from a student and his or her parents.

Surveys were distributed at the schools during April, May and June of 1979. They were returned to CIOE for analysis. All survey data were coded, keypunched, and verified. Analyses were performed on the Cornell IBM 370/168, primarily using SPSS programs.

Enrollment Analyses and Selection of Programs

Enrollment data for secondary occupational education programs in 1977-78 were obtained from the Bureau of Occupational Education Research of the New York State Education Department. These data had been collected by means of the New York State Occupational Education Data System (OEDS) survey. The data obtained were unduplicated counts of boys and girls in programs making up the area of Trade, Industrial, and Service education.[1] Statewide data were obtained for each of the 25 programs. For eleven large-enrollment programs, data were also obtained for each big city district,[2] each of the 45 area vocational centers (BOCES districts), and each of the 36 local comprehensive high school districts (LEAs)[3] and those groups of local comprehensive high schools within individual area vocational center districts which have the appropriate programs.

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[1] Unduplicated counts in a program include each student in a given program once, no matter how many courses the student is taking within that program at a given time. Thus, unduplicated enrollments in a program may be less than the total enrollments in all of the courses included in the program.

[2] The big city districts are Buffalo, New York City, Rochester, Syracuse, and Yonkers.

[3] "LEAs" are Local Education Agencies.

Enrollment data were analyzed to determine which programs were most suitable for inclusion in the second phase of the sex-role stereotyping project. Of the twenty-five programs in secondary Trade, Industrial, and Service education in New York State in 1977-78, thirteen were non-traditional for females (were less than 20% female), and three were non-traditional for males (were less than 20% male). All twenty-five programs, the unduplicated count of enrollments of males and females in each, and the percentages of the underrepresented sex are indicated in Table 2. The sixteen programs that were non-traditional for either sex are identified in the table.

Several enrollment criteria were used to choose appropriate programs for inclusion. In order to obtain an adequate study population, we sought programs which (a) had total enrollments greater than 1,000 students; (b) were offered in at least twenty BOCES, LEAs and/or school districts; (c) had cross-sex enrollments in at least five school districts, including more than two non-traditional students in at least one school district within each type of district (i.e., BOCES, LEAs and big city).

These three criteria reduced the number of programs under consideration from sixteen to seven. As shown in table 2, five programs had enrollments of fewer than 1,000 students. These programs were Appliance Repair, Custodial Services, Maritime Occupations, Social Service Paraprofessionals, and Pre-technical Curricula. Two programs were offered in fewer than 20 districts. These were Aviation Operations (offered by 8 districts) and Textile Production and Fabrication (offered by 16 districts). The program of Air Conditioning, Refrigeration, and Heating had cross-sex enrollments in only one district. Finally, Electrical Occupations had very low cross-sex enrollments (two or fewer girls) in all of the BOCES districts that offered the program. The seven programs that met the basic enrollment criteria are given in Table 3.

Table 2

Enrollments in Secondary Trade, Industrial and Service Education in New York State, 1977-78, by Sex

Occupational Program	Enrollments Male	Enrollments Female	Smaller Percentage Male	Smaller Percentage Female
*Prevocational Curricula	8918	1921		17.7%
*Air Conditioning, Refrigeration and Heating	1918	3		0.2
*Appliance Repair	400	56		12.3
*Automotive Services	20411	341		1.6
*Aviation Operations	3034	24		0.8
Commercial Art Occupations	1383	1466	48.5%	
Photography Occupations	949	695	42.3	
*Construction and Maintenance Trades	9988	148		1.5
*Custodial Services	609	35		5.4
*Drafting	4016	482		10.7
*Electrical Occupations	6431	78		1.2
*Electronics	4728	158		3.2
Graphic Arts	3123	941		23.2
*Maritime Occupations	635	51		7.4
*Machine and Metal Industries	6438	86		1.3
**Personal Services	248	8834	2.7	
Plastics Occupations	20	8		28.6
Law Enforcement Training	72	45		38.5
**Social Service Paraprofessionals	1	12	7.7	
Educational Paraprofessionals	4	12	25.0	
Public Services Occupations, Other	14	29	32.6	
Quantity Food Occupations	1737	1537		46.9
**Textile Production and Fabrication	332	2287	12.7	
*Pretechnical Curricula	11	0		0.0
Other Trade, Industrial, and Service	1341	786		37.0
Totals	76761	20035		20.7%

* Less than 20% female (non-traditional for females)
** Less than 20% male (non-traditional for males)

Table 3

Programs Which Met Enrollment Criteria

Programs	Number of Districts Offering Program	Districts with Cross-Sex Enrollment in Program
Pre-vocational Curricula	44	33
Automotive Services	72	48
Construction and Maintenance Trades	68	12
Drafting	53	50
Electronics	42	17
Machine and Metal Industries	62	13
Personal Services	60	43

In order to study each program chosen for inclusion in detail, four was the maximum number of programs to be included. The four programs chosen were Personal Services, Drafting, Electronics, and Construction and Maintenance Trades. In selecting from the seven programs that met the enrollment criteria, a number of factors were taken into account.

Personal Services was chosen because it was the only one of the remaining programs which had low cross-sex enrollment of boys and which simultaneously had a sufficient number of schools with male enrollments. Within Personal Services the sub-area of Cosmetology was targeted for study because it is the most non-traditional for males.

Drafting had the largest proportion of females among the seven programs, and many districts enrolled girls in this program. Drafting is thus a program in which some progress toward equal enrollments has been made, although the proportion of females in this program is still far below the federal 20 percent criterion level.

Electronics was selected as an example of a program in which enrollments appear to lag behind the potential support from parents for girls to enter the program. In the pilot study, about 50 percent of girls' parents indicated they would encourage their daughter to study electronics if she were interested, although girls constituted only 3.2 percent of electronics enrollments statewide.

The fourth program chosen was Construction and Maintenance Trades, a program in which girls comprised fewer than two percent of total enrollments in 1977-1978. This program was chosen because the U.S. Department of Labor had set goals for hiring women in the construction trades of 3.2 percent by 1978 and 6.9 percent by 1980.

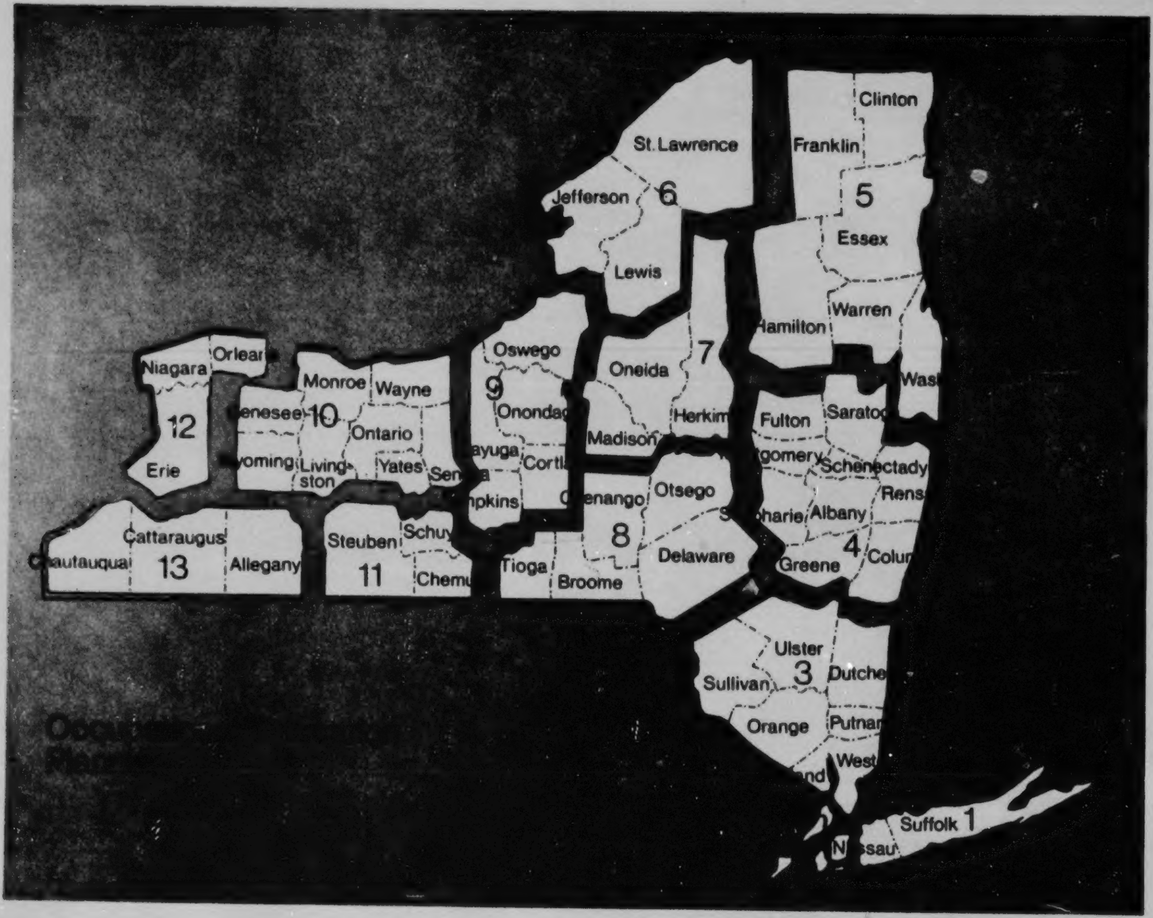
Selection of Schools for the Occupational Education Sample

The next stage was the selection of schools whose occupational education students, their parents, teachers and counselors would be surveyed. For each of the four vocational programs selected and within the three types of school districts, we examined the distributions of students by sex. For each of these schools and programs, we attempted to select two schools--one with relatively large percentages of the underrepresented sex (called high cross-sex enrollment schools) and one with relatively low cross-sex enrollments. Attempts were made to include all thirteen Occupational Education Planning Regions (see Figure 1) among the schools selected. Selections of specific schools were made in such a manner as to maximize the contrast between low and high cross-sex enrollments at schools within types of district and region. When possible, schools which had approximately the same total enrollments in the program of interest and offered similar courses within the program were selected.

The OEDS enrollment figures for 1977-1978 indicated that in the schools to be surveyed there were 1,981 boys and 203 girls in courses that

FIGURE 1

Occupational Education Planning Regions of New York State


St. Lawrence
Jefferson
6
Lewis
Clinton
Franklin
5
Essex
Hamilton
Warren
7
Oneida
Herkim
Oswego
9
Onondag
Madison
Niagara
Orlean
12
Erie
Genesee
10
Monroe
Wayne
Ontario
Wyoming
Living-ston
Yates
Sen
Cayuga
Cortl
Tompkins
Chenango
Otsego
Fulton
Saratog
Wash
Montgomery
Schenectady
Rens
Schoharie
Albany
Cattaraugus
Chautauqua
13
Allegany
Steuben
11
Schuy
Chemu
Tioga
Broome
8
Delaware
Greene
4
Colum
Ulster
3
Dutche
Sullivan
Orange
Putnam
West
Rockland
Suffolk
1
Nassau

were non-traditional for females, and 700 girls and 62 boys in courses that were non-traditional for males. Thus the occupational education survey sample was estimated to include about 9 percent non-traditional students.

It turned out, however, that the non-traditional student enrollments in these schools and courses was closer to seven percent. In fact, some schools in the "high" cross-sex enrollment sample (based on figures from the previous year) actually enrolled fewer non-traditional students in 1978-1979 than the "low" cross-sex enrollment schools with which they were to be compared. Since it was not feasible to replace these schools because the agreements for sampling had already been established, it was necessary to categorize schools by their actual enrollments. This left the study without high enrollment comparison schools for girls in Construction and boys in Cosmetology, and thus reduced the scope of the study. In spite of this limitation, our ability to generalize about the population from the sample was not affected.

In order to determine whether the sample of students responding to the study represents the students in the schools initially selected, the proportional distribution of boys and girls in each of the samples and the student population of the schools was determined for each program. Using the 1978-1979 State Education Department's enrollment figures (available only after the initial selection of the samples, and substituting 1977-1978 information when the 1978-1979 figures were missing), we find that the sample and the overall populations of the schools within each program are almost identical in their distributions of students by sex.

Selection of Schools and Classes for the Tenth Grade Sample

Tenth grade students included in the study were selected from local "feeder" schools for each of the 32 schools in the occupational education sample. Sixteen of the schools in the occupational education sample included non-occupational courses in their curricula. These schools served as their own feeder schools. The other 16 feeder schools were chosen using random selection procedures from lists of schools whose students attended a given occupational education school. Thus we had a total of 48 schools, of which 16 were only in the occupational education sample, 16 were in the tenth grade sample and 16 were in both samples.

At each feeder school, one general, non-occupational tenth grade class was selected by school personnel for inclusion in the sample. Estimating 25 students per class, the tenth grade sample was to include approximately 800 students.

Notification and Participation of Schools

All school selections were approved by the Bureau of Educational Data Systems of the New York State Education Department.

In order to obtain the cooperation of the 48 schools, we sent letters to the district superintendent, the principal or the occupational director, or both, and the director of guidance. We then called the director of guidance at each school to arrange the distribution and collection of surveys.

Thirty-seven of the 48 schools agreed to participate in the survey program. Thirty-four schools actually returned student surveys. Fifteen of these were only involved in the occupational education survey, 12 only in the tenth grade survey, and seven in both. Thus occupational education surveys were obtained from 22 of the 32 schools in the occupational education survey sample, and tenth grade surveys were obtained from 19 of the 32 schools in the tenth grade survey sample.

Reasons given for non-participation in the survey project included commitment to other surveys or projects, lack of time due to a strike by teachers, and inconvenience due to split sessions at the high school. Some school districts declined to participate without specifying a reason.

We were not able to make some of the comparisons planned for the study due to the loss of schools from the samples. For example, there were eight incomplete pairs of schools in the occupational education sample. Thus many of the comparisons of high and low cross-sex enrollment schoools could not be made. In addition, some of the feeder schools did not participate, preventing us from comparing results for these feeder schools with results for the occupational education courses with which they were associated. Nonetheless, a large number of interesting analyses were achieved.

Survey Returns from Students

OCCUPATIONAL EDUCATION SAMPLE

Table 4 gives (a) reported enrollments in programs of interest in the 32 schools in the occupational education sample; (b) the numbers of surveys returned by males and by females at these schools; and (c) the percentages of students who returned surveys. Schools are identified by region and are grouped by program. Regions are identified in Figure 1.

At the 22 schools returning occupational education student surveys, the reported enrollment in programs of interest was 1,121, rather than the estimated enrollment of 3,000 in the original sample of 32 schools. The average rate of response was 51 percent of reported enrollments, with a wide variety of response rates at different schools.

One reason for the large number of non-respondents was the requirement of one big city district that parental permission be obtained before surveys could be distributed to students. Another cause of non-response was that some schools distributed surveys to selected courses rather than to all courses within a program. This was the reason for the extremely low rate of response from students in Personal Services at school 30.

Table 4

Occupational Education Sample--Enrollments and Student Survey Returns

Program	Region	Enrollments M	Enrollments F	Enrollments T	Survey returns M	Survey returns F	Survey returns T	% Return M	% Return F	% Return T
Construction & Maint. Trades	9	212	1	213	157	1	158	74	100	74
	1	40	0	40	31	0	31	78	--	78
	1	30	0	30	23	0	23	77	--	77
	12	146	3	149	49	0	49	34	0	33
	2	112	0	112	19	0	19	17	--	17
Totals		540	4	544	279	1	280	52	25	51
Drafting	13	21	2	23	15	1	16	71	50	70
	13	8	4	12	8	4	12	100	100	100
	11	14	6	20	12	4	16	86	67	80
	11	18	1	19	17	1	18	94	100	95
	6	46	4	50	13	1	14	28	25	28
	8	7	1	8	6	0	6	86	0	75
	8	29	8	37	17	4	21	59	50	57
	4	12	3	15	9	2	11	75	67	73
	2	171	57	228	51	21	72	30	37	32
Totals		326	86	412	148	38	186	45	44	45
Electronics	10	49	0	49	26	0	26	53	--	53
	10	26	0	26	25	0	25	96	--	96
	1	42	0	42	17	0	17	40	--	40
	12	84	12	96	63	8	71	75	67	74
	3	44	0	44	23	0	23	52	--	52
Totals		245	12	257	154	8	162	63	67	63
Personal Services	5	2	56	58	2	43	45	100	77	78
	5	1	62	63	1	55	56	100	89	89
	1	0	153	153	0	16	16	--	10	10
	10	7	130	137	5	82	87	71	63	64
Totals		10	401	411	8	196	204	80	49	50
Grand Totals		1121	503	1624	589	243	832	53%	48%	51%
Traditional males		1111			581			52%		
Non-traditional males		10			8			80%		
Traditional Females			401			196			49%	
Non-traditional females			102			47			46%	

TENTH GRADE SAMPLE

Enrollments from two of the 19 tenth grade classes had to be estimated due to lack of information from teachers. The total enrollment in the 19 classes in the tenth grade sample was approximately 533 students. Thus these tenth grade classes averaged about 28 students. Surveys were returned by 193 out of 255 males (76%)and by 209 out of 278 females (75%). Survey returns from parents, teachers, and counselors will be discussed in subsequent chapters.

CHAPTER III

TENTH GRADE RESULTS

The Survey

Questionnaires were constructed to assess attitudes toward various issues surrounding the choice of an occupational education program. They were designed to help identify factors that lead to the underrepresentation either of males or of females in certain of these programs. The results to be presented in this section are based on the questionnaires given to the tenth grade students enrolled in regular (non-occupational) classes and their parents.

The Tenth Grade Student Survey is composed of five sections. In the first section students are asked to supply demographic information (sex and race) and indicate whether they have taken, or plan to take, a course in occupational education. The influences on students' decisions to enroll in particular occupational courses are examined in the second section. Students' perceptions concerning the attitudes of parents, counselors, and male and female friends toward their decision as well as the students' rating of job opportunities available to them following completion of the course are also requested. The anticipation of support for or opposition to a decision to enroll in various occupational courses, by parents, counselor, and friends of either sex, is sampled in the third section. The fourth section inquires whether the student has considered taking a course in which few students of his or her sex are represented and, given such a consideration, if anyone offered encouragement or discouragement to such a plan. When students indicated that enrolling in such a course would make them uneasy, they were also asked to cite factors that would alleviate the uneasiness. The final section of the survey contained questions pertaining to current work experience, life-plans for both one and five years following high school graduation, and parental occupation.

The Tenth Grade Parent Survey samples parental attitudes regarding their child's career and education. Specifically, questions were asked about: (1) current and past feelings about the student's decision to take a certain occupational course; (2) support or opposition for a hypothetical decision to enroll in various occupational courses; (3) perceived job opportunities following completion of the occupational course, if chosen; and (4) wishes for the child's life-plans, both one and five years after graduation. Copies of both surveys are reproduced in the Appendix.

The Respondents

For most students, tenth grade is the year during which they must decide whether to take occupational education programs, particularly those offered outside the home school at an area vocational school. Because we were interested in learning the reasons why students chose or rejected certain occupational education programs, we studied tenth grade students enrolled in social studies and English courses. Among these students, 38 percent of both boys and girls were also enrolled in occupational education courses. Fifty-three percent of black respondents and 62 percent of Hispanic respondents were taking occupational education courses. We also surveyed the parents, teachers and guidance counselors of students in the sample.

Tenth Grade Student Surveys were returned by 193 boys and 209 girls from 19 different schools throughout New York State. Tenth Grade Parent Surveys were returned by 100 fathers and 112 mothers of boys, and 104 fathers and 140 mothers of girls. In this discussion, "mothers" refers to all female respondents and "fathers" refers to all male respondents to the survey. Table 5 categorizes respondents to the survey.

Table 5

Respondents to Tenth Grade Parent Survey by Sex and Role

Male Respondents Categories	Numbers	Female Respondents Categories	Numbers
Father	188	Mother	241
Stepfather	10	Stepmother	5
Grandfather	1	Grandmother	3
Other male relative	2	Other female relative	2
Male Guardian	1	Female guardian	1
Other male	2	Other female	0
Total	204	Total	252

Data Analyses

The surveys completed by tenth grade students were analyzed to make the following comparisons:

1. Comparisons of responses from boys and girls. These comparisons were made to determine whether boys and girls had different backgrounds, experience, plans, etc.
2. Comparisons of responses from students of each sex who did or did not express an interest in non-traditional occupational education courses.
3. Comparisons were also made of responses given by parents of boys and girls.

COMPARISONS OF THE RESPONSES OF BOYS AND GIRLS

Course Choice

Enrollments in general home economics differed significantly for boys and girls. Seventy-eight boys and 192 girls had taken home economics. Twenty-nine boys and 54 girls planned to take a home economics course in 11th or 12th grade.

Thirty-eight percent of both girls and boys were currently taking an occupational education course. Of the 70 boys who named their courses, eight were non-traditional--one in home economics, one in personal services, and six in business and office occupations. Of the 75 girls who named their courses, five were non-traditional--two in drafting, and one each in machine and metal industries, in agriculture, and in other trade and industrial. Most girls (61) were enrolled in business and office courses.

Eighty-four percent of those already taking occupational courses planned to take similar or other occupational education courses in 11th or 12th grade. Five percent did not plan to do so, and 11 percent were unsure. Of those not taking occupational education courses in tenth grade, 49 percent planned to take an occupational education course in 11th or 12th grade, 20 percent were unsure, and 31 percent did not plan to do so. Those students who were taking an occupational education course in tenth grade were more likely than other students to plan to take an occupational education course in 11th or 12th grade. Thus, approximately 57 percent of boys and 68 percent of girls in the total sample planned to take occupational education courses in 11th or 12th grade.

Parental Responses to Course Choices

Parents of tenth grade students were asked to indicate whether their child was planning to take an occupational education course in 11th grade. They were also asked to indicate whether they supported or opposed their child's decisions concerning these courses.

A large number of parents neither supported nor opposed their child's decision regarding home economics, whereas 75 percent or more supported their child's decision concerning other occupational education courses. Usually this decision was to take such a course. As may be expected, far fewer parents of boys than of girls indicated that their child was planning to take home economics.

None of the fathers or mothers who indicated that their child was planning to take an occupational course expressed opposition to these plans. However, opposition to the students' plans were expressed by parents of some students who did not plan to take an occupational education course. These parents wanted their children to take such courses.

These results indicated that:

(1) Those students who planned to take an occupational education course were doing so with parental support.

(2) Some of the students who were not planning to take an occupational education course were doing so despite their parents' support for such courses.

It is interesting to consider the support that students perceived for the occupational education course they planned to take (Table 6). Overall levels of perceived support were rather high. Girls reported somewhat lower levels of support from their fathers and considerably higher levels of support from their female friends than boys did. These two differences may result from less accurate perceptions of attitudes rather than from lower levels of support.

Parental Occupations of Tenth Graders

We were interested in determining whether parents of students planning to take occupational education courses differed in occupations from those of students who did not plan to take such courses.

Table 6

Support Reported by Tenth Graders for Planned Occupational Education Course by Sex

Source of Support or Opposition	Mean Response	
	Boys	Girls
Fathers or male guardians	1.13	1.25*
Mothers or female guardians	1.15	1.16
Guidance counselors	1.29	1.20
Male friends	1.41	1.25
Female friends	1.56	1.19**

* Difference significant at .051
** Difference significant at .001

Coding for responses: 1 = supports your choice
2 = neither supports nor opposes your choice
3 = opposes your choice

We asked students to indicate what type of employment their father (or male guardian) and their mother (or female guardian) usually had. About 75 percent of students responded to these questions. Students' answers were coded using the nine major categories of the Dictionary of Occupational Titles (U.S. Department of Labor, 1977): professional, technical and managerial; clerical and sales; service; agriculture, fishery, forestry, and related; processing; machine trades; benchwork; structural work; and miscellaneous. Six additional categories were used to classify survey respondents: deceased, housewife, disabled, unemployed, retired, and other. The occupational categories of fathers and mothers of all tenth grade students who responded to these questions are shown in the Appendix (Table 55).

When occupational cetegories of parents of boys were compared to those of parents of girls, they did not differ even when controlling for students' plans for occupational education courses (chi square test). This confirms that the sample of students are representative by sex.

There is a slight suggestion that parents of those not specifically choosing occupational education courses have higher status occupations than those whose children do choose such courses. For instance, 34.4 percent of the fathers of boys not planning an occupational education course are in professional, technical and managerial work in contrast with 22.9 percent of the fathers of boys with such plans. However, given the small number of respondents, data on professional, technical and managerial occupations is significant only at the .10 level and applies to girl's fathers and boy's mothers and fathers. Only three other differences are significant (at the .05 level). Boys who plan to enter a vocational education course are more likely to have fathers in machine trades (14.5%) than boys without such plans (3.3%). Among girls who plan an occupational education course, a higher proportion (13.8%) have fathers in service occupations than do the girls whose plans are negative or not firm (1.9%). On the other hand, fathers of girls without plans to take occupational education courses are more often employed in structural work occupations (15.1%) than are fathers of girls planning occupational education courses (12.8%). None of the other differences are significant for mothers' occupations.

Influences on Choice of Courses

Students indicated who had helped them decide on their choice of an occupational education course (see Table 7). There were some differences between boys' and girls' responses.

Larger proportions of boys indicated they had been helped by male friends, fathers and brothers, whereas larger proportions of girls indicated they had been helped by female friends, mothers and sisters. Thus decisions about occupational education courses were typically influenced by others of the student's sex.

Table 7

Selecting Occupational Education Courses
Percentage of Students Receiving Help by Source and Sex

Choices	Boys (N=115)	Girls (N=144)
No one or myself	40.9%	40.3%
Mother or stepmother	28.7	44.5
Father or stepfather	33.0	16.7
Female friends or sister	7.8	51.4
Male friends or brother	30.4	13.3
Any counselor	13.0	20.8
Any teacher	6.1	4.2
Others	9.6	9.0

Students also indicated who was the greatest influence in their decision about an occupational education course. Responses again differed by sex (Table 8). Among boys, the persons mentioned most frequently were no one or myself, father, brother, and mother, in that order. Among girls, the persons mentioned in order were mother, no one or myself, and female friends.

If one wishes to affect course choices by tenth grade students, it seems apparent that family members and peers, as well as the students themselves, will need to be reached.

Table 8

Source of Greatest Influence on Choice of Occupational Education Course by Sex

Sources of Influence	Boys (N=84)	Girls (N=104)
No one or myself	31.0%	21.2%
Mother or stepmother	10.7	32.7
Father or stepfather	21.4	8.7
Female friends or sister	6.0	19.3
Male friends or brother	19.0	2.9
Any counselor	3.6	9.7
Any teacher	3.6	2.9
Others	4.8	3.0

Analysis of Attitudes toward programs

The tenth Grade Student Survey included questions concerning the reaction students expected if they enrolled in certain programs for the following year. Eight programs were listed: Automotive Services, Cosmetology, Construction Trades, Data Processing, Electronics, Machine and Metal Industries, Drafting, and Home Economics. Expected reactions were requested in regard to fathers or male guardians, mothers or female guardians, home school guidance counselor, male friends and female friends. The listed reactions were:

Would have supported it;
Would have neither supported nor opposed it;
Would have opposed it; and
I don't know.

Table 9

Attitudes Toward Programs Attributed to Others by Tenth Grade Boys and Girls

		Of Fathers %				Of Mothers %				Of Home School Guidance Counselors %				Of Male Friends %				Of Female Friends %			
Programs	Respondents	Support	Neither	Oppose	Don't Know or No Response	Support	Neither	Oppose	Don't Know or No Response	Support	Neither	Oppose	Don't Know or No Response	Support	Neither	Oppose	Don't Know or No Response	Support	Neither	Oppose	Don't Know or No Response
Automotive Services	Boys	48	20	6	26	49	19	10	22	36	10	13	40	57	17	5	21	32	27	9	32
	Girls	22	23	24	31	17	25	36	21	10	20	25	45	11	19	39	31	22	19	32	28
Cosmetology	Boys	6	17	38	39	12	19	30	40	9	16	23	51	2	9	59	31	11	18	24	47
	Girls	47	24	7	22	60	20	7	13	43	20	7	30	48	26	6	21	64	17	2	17
Construction & Maintenance Trades	Boys	48	20	5	27	48	20	8	24	27	20	7	45	44	25	3	28	30	30	7	34
	Girls	21	25	25	29	19	23	33	24	13	20	21	46	10	21	36	33	18	22	31	30
Data Processing	Boys	42	24	4	30	50	24	4	23	37	12	5	46	35	28	5	31	30	30	5	36
	Girls	56	20	3	21	64	16	4	16	46	20	3	31	43	27	3	27	56	20	5	20
Electronics	Boys	60	17	2	21	62	16	2	20	41	12	6	40	54	19	3	23	36	28	5	32
	Girls	29	23	15	33	29	25	21	25	16	22	16	45	14	24	27	34	25	23	22	29
Machine & Metal Industries	Boys	44	22	6	28	41	25	8	26	35	19	5	41	48	22	3	27	27	31	7	35
	Girls	19	18	29	33	18	23	34	25	11	20	22	47	10	21	36	33	16	20	34	30
Drafting	Boys	42	22	2	34	42	24	5	28	30	14	7	50	38	24	6	32	26	34	4	36
	Girls	30	23	15	32	31	22	18	29	21	21	14	44	18	22	21	38	30	22	17	31
Home Economics	Boys	11	19	28	42	22	19	22	37	13	16	13	58	5	14	45	36	18	18	16	49
	Girls	57	24	4	15	65	19	5	11	55	16	1	28	52	23	3	22	62	19	3	16

Answers were scored as follows:

1 = support
2 = neither support nor oppose
3 = oppose

"I don't know" was not averaged into the mean response. Table 9 presents responses given by the 193 boys and the 209 girls to these questions for each program and each category of person. Male friends were generally expected to be the most opposed to non-traditional programs for boys or girls; this agrees with the results of Lewis and Kaltreider (1976).

T-tests indicated that nearly all mean responses (Table 10) differed between boys and girls (at .01). That is, boys and girls differed in the degree of support or opposition that they attributed to each category of person for nearly all programs. All such differences were sex-stereotyped in that greatest support was expected by students who would be taking a course traditional for their sex. There were only three exceptions:

(1) There were no significant differences in expected reactions of fathers and mothers to data processing for boys and girls. In both cases, opposition to enrollment in data processing was minimal. Males were supported over 40 percent of the time by either parent; females, over 50 percent by either parent.

(2) Expected reactions of guidance counselors and male friends to data processing did not differ between boys and girls.

(3) Twenty-six percent of boys and 30 percent of girls perceived support by female friends for enrollment in drafting.

Data processing is a mixed program; it is not surprising that less sex-stereotyping was evident in regard to this program than to others.

Table 10

Attitudes Toward Programs Attributed to Others by Tenth Grade Boys and Girls

(mean values)*

Program	Sex of Respondent	Of Fathers	Of Mothers	Of Guidance Counselors	Of Male Friends	Of Female Friends
Automotive Services	Boys	1.43	1.51	1.61	1.35	1.67
	Girls	2.02	2.24	2.29	2.41	2.14
Cosmetology	Boys	2.53	2.29	2.29	2.83	2.25
	Girls	1.49	1.38	1.48	1.47	1.25
Construction and Maintenance Trades	Boys	1.41	1.48	1.63	1.43	1.66
	Girls	2.05	2.18	2.13	2.39	2.18
		(p < .067)	(p <.080)	(Not sig.)	(Not sig.)	
Electronics	Boys	1.27	1.25	1.41	1.33	1.55
	Girls	1.80	1.89	2.00	2.19	1.97
Machine and Metal Industries	Boys	1.47	1.55	1.49	1.38	1.70
	Girls	2.15	2.22	2.22	2.41	2.26
Drafting	Boys	1.39	1.47	1.55	1.52	1.66
	Girls	1.78	1.83	1.87	2.05	1.81
						(p< .076)
Home Economics	Boys	2.30	1.99	1.99	2.63	1.97
	Girls	1.38	1.33	1.26	1.38	1.31

* All means differ by sex at .01 or greater, except those indicated in the table.

1 = support

2 = neither support or oppose

3 = oppose

A large number of students either indicated that they did not know what the reaction would be if they chose various programs, or did not answer; the percentage of response was generally higher for programs that were traditional for the student. In addition, response rates were generally lowest for the questions concerning guidance counselors' expected reactions. The first result may mean that students had not discussed non-traditional choices with these persons or that they did not know these persons' attitudes well enough to predict their responses to non-traditional choices, though they could do so for more traditional choices. Lack of contact with the guidance counselors probably explains the second result. In any case, it appears that many students had no idea how their parents, friends and guidance counselors might react to a non-traditional choice of course.

The Tenth Grade Parent Survey included questions designed to determine parents' reactions had their child chosen each of the eight programs included in the Tenth Grade Student Survey. Responses were scored in the same manner as for the Tenth Grade Student Survey. Moreover, we were able to compare the responses of individual students with those of their parents because the surveys had the same identification numbers.

Responses from parents are given in Table 11. Parents' attitudes differed by sex of student in a sex-stereotyped fashion, except for a mixed program, Data Processing. Furthermore, mean responses for mothers and fathers were very similar (Table 12), and the means of students' estimates of fathers' and mothers' reactions to each program (Table 11) are remarkably similar to the means of actual reactions. On a family-by-family basis, a comparison of students' perceptions of their parents' attitudes with the attitudes expressed by the parents showed very good agreement (Kendall's tau was significant at .05 or better for all comparisons). Students who estimated their parents' likely reactions were thus quite accurate.

Table 11

Parents Attitudes Toward Programs for Tenth Grade Students by Sex of Parent and Child

(percentages)

	%								%							
	Fathers								**Mothers**							
	Of Boys (N=100)				Of Girls (N=104)				Of Boys (N=112)				Of Girls (N=140)			
Program	Support	Neither	Oppose	Don't Know or No Response	Support	Neither	Oppose	Don't Know or No Response	Support	Neither	Oppose	Don't Know or No Response	Support	Neither	Oppose	Don't Know or No Response
Automotive Services	68	19	10	3	28	33	29	10	67	16	11	6	27	38	28	7
Cosmetology	15	20	46	19	55	31	11	3	19	28	36	17	54	31	12	3
Construction & Maintenance Trades	58	24	8	10	21	35	35	9	56	23	10	11	19	33	36	12
Data Processing	67	20	6	7	65	25	5	5	74	17	4	5	73	21	3	3
Electronics	79	15	2	4	41	35	16	8	86	11	1	2	35	39	15	11
Machine & Metal Industries	64	18	12	6	19	39	33	9	64	22	6	8	20	35	33	12
Drafting	63	21	6	10	47	28	14	11	68	15	7	10	41	31	19	9
Home Economics	21	34	29	16	60	28	10	2	27	35	28	10	62	25	9	4

TABLE 12

Attitudes Toward Programs Reported by Parents of Tenth Grade Boys and Girls (mean values)*

Program	Fathers or Male Guardians	Mothers or Female Guardians
Automotive Services	1.40 2.01	1.40 2.02
Cosmetology	2.38 1.54	2.21 1.57
Construction and Maintenance Trades	1.44 2.15	1.48 2.18
Data Processing	1.34 1.36 (not sig.)	1.27 1.28 (not sig.)
Electronics	1.20 1.73	1.13 1.78
Machine and Metal Industries	1.45 2.15	1.38 2.14
Drafting	1.37 1.63	1.33 1.75
Home Economics	2.10 1.49	2.01 1.45

* In each case, the upper value is the mean value for boys' parents and lower value is the mean value for girls' parents. All means differ by sex of student at .01 or greater, except those indicated in the table.

1 = support

2 = neither support nor oppose

3 = oppose

Therefore the analysis of the tenth grade students and parent survey indicates:

(1) Attitudes about programs attributed by students to parents, guidance counselors and friends were strongly sex-stereotyped.

(2) Many students did not know how these people felt about programs, especially about programs that would be non-traditional for the student. This was particularly true of the expected reactions of guidance counselors.

(3) Parents' actual reactions were similar to those attributed to them by the students, and were strongly sex-stereotyped.

It appears that one method to increase non-traditional enrollments substantially would be to change parental attitudes toward non-traditional programs for their children and to make students aware of these changed attitudes.

Reasons for Course Selections

Students take occupational education courses for many reasons, only some of which are work-related. Table 13 gives tenth grade students' responses to possible reasons for taking their occupational education courses.

Both boys and girls most frequently selected learning a skill and preparing for a job as their reasons for choosing their occupational education course. Other job-related reasons of "want to try out this field" and "think I will like the work" were also frequently selected. Although girls chose a course to "try out the field" more often than boys, the difference was not significant. The next most common choice was related to the course itself. Nearly one-half of both boys and girls thought that "the course sounds interesting." Job availability was also chosen by many boys and girls.

Table 13

Reasons Given by Students for Selecting Their Occupational Education Course(s)
(percentages)

Reasons	Boys (N=116)	Girls (N=144)
To learn a skill and prepare for a job	58.6%	64.6%
Want to try out this field	48.3	59.7
Think I will like the work	51.7	56.9
Course sounds interesting	48.3	48.6
Jobs available in this field	44.8	40.3
I'm good at this type of work	44.8	27.1
Good trade with good income	39.7	29.9
Know people working in the field	29.3	18.8
Course recommended by people who had taken it	16.4	20.1
Need the credits	9.5	12.5
Counselor convinced me	5.2	9.7
Parents convinced me	7.8	7.6
No other interesting course open	7.8	3.5
Friends are going to take the course	6.0	5.6
Want to leave home school	5.2	5.6
To work in parents' business	5.2	0.7
Other	6.0	9.7

Boys selected three other job-related responses more frequently than girls. These were "I'm good at this type of work," "I know people working in the field," and "it is a good trade with a good income." These differences seem to indicate that more boys than girls were acquainted with the nature of the work in their chosen occupational field and with people in that occupation, even though the difference is only significant at the .05 level for the reason "I'm good at this type of work."

Thus, most reasons for course selection were job-related, though the quality of the course was important to many students. Boys seemed more likely to be acquainted with the nature of the work and with people in their field. More girls than boys appeared to need information about or experience in the occupational fields they selected for study.

Expected Job Opportunities

Job opportunities often motivate students to take certain courses. Tenth grade students planning to take an occupational education course and their parents were asked to estimate local job opportunities in the child's occupational education field upon graduation. Mean scores are indicated in Table 14. Mean scores were similar for each group, all in the good-to-average range, particularly when we restricted the cases to those in which both the child and his or her parent responded to the question. However, there were discrepancies between some boys' statements and their parents' statements; there was close agreement on a case-to-case basis between girls' statements and their parents' statements.

Table 14

Job Opportunities Expected Locally by Students and Parents in the Occupational Education Field Planned by Tenth Graders (mean values)*

	Students	Fathers	Mothers
Boys	2.27 (N=93)	2.37 (N=51)	2.40 (N=60)
Girls	2.27 (N=107)	2.69 (N=52)	2.32 (N=79)

*1 = excellent
2 = good
3 = average
4 = not good
5 = poor

It is interesting that some students were planning to take occupational education programs even though they thought that job opportunities in their fields were not good or were poor. Perceptions and state projections of job opportunities are discussed in detail in Chapter V.

Job Experience

More tenth grade boys than girls reported holding full-time or part-time jobs, whereas a larger proportion of girls than of boys indicated that chores at home were their current work responsibilities (see Table 15). These results are similar to those found in our pilot study (Ott, 1978b). They suggest that boys receive greater formal work experience than girls outside the home, as early as tenth grade. One way to broaden girls' course choices may be to broaden their formal work experience as teenagers.

Table 15

Tenth Graders' Current Work Responsibilities

Work Responsibilities	Boys (N=164)	Girls (N=190)
Full-time job	6.1%	1.6%
Part-time job	37.8	22.6
Occasional jobs for pay	28.0	31.1
Volunteer work	6.1	4.2
Chores at home	26.8	40.5
None	15.2	16.3
Other	0.6	3.2

Plans of Students

As indicated in Table 16, boys and girls differed in their plans for the year after high school. A larger proportion of girls than of boys planned to attend college, to get married or to work part-time. A larger proportion of boys than of girls planned to join the armed services or to attend a technical school.

Table 16

Tenth Graders' Plans for the Year After High School Graduation by Sex

Plans	Boys (N=174)	Girls (N=202)
Work full-time	31.0%	28.7%
Work part-time	21.3	31.2
Join the armed services	20.7	5.4
Enter a training or apprentice program	5.2	5.9
Go to a technical school	10.9	3.0
Go to a two-year college	16.7	22.3
Go to a four-year college	36.8	48.0
Get married	4.6	12.9
I don't know	12.1	12.9
Other	7.5	5.4

Parents' preferences for the same period of time differed both by the sex of the parent and by the sex of the student (Table 17). More girls' mothers than girls' fathers wanted their daughter to attend a four-year college; equal proportions of fathers and mothers wanted their son to do so. Two-year college attendance, working full-time and working part-time were more popular options among girls' parents than boys' parents. Attendance at a technical school and joining the armed services were more often selected by boys' parents than by girls' parents.

Plans for five years after high school graduation also differed by the sex of the student. Once again, more girls than boys were interested in part-time work, college attendance, and marriage; more boys than girls were interested in the armed services (see Table 18). In contrast with plans for the year after high school, few boys or girls were interested in attending a technical school five years after high school graduation.

Table 17

Parents' Wishes for Child One Year After High School by Sex of Parents and Child

Plans	For Boys		For Girls	
	Fathers (N=100)	Mothers (N=112)	Fathers (N=100)	Mothers (N=138)
Work full-time	27.0%	27.7%	34.0%	31.2%
Work part-time	11.0	21.4	19.0	27.5
Join the armed services	16.0	16.1	4.0	5.8
Enter a training or apprentice program	14.0	15.2	19.0	15.9
Go to a technical school	21.0	24.1	16.0	7.2
Go to a two-year college	28.0	31.3	36.0	36.2
Go to a four-year college	58.0	60.7	48.0	60.9
Get married	4.0	2.7	5.0	4.3
I don't know	1.0	2.7	7.0	4.3
Other	5.0	3.6	2.0	8.7

Table 18

Tenth Graders' Plans for Five Years After High School Graduation by Sex

Plans	Boys (N=174)	Girls (N=199)
Working full-time	65.5%	65.3%
Working part-time	5.2	14.1
In the armed services	13.2	2.0
In a training or apprentice program	4.6	3.5
In a technical school	2.9	1.5
In or a graduate of a two-year college	8.0	12.1
In or a graduate of a four-year college	19.0	28.6
Married	17.8	29.6
I don't know	12.6	10.1
Other	6.3	6.0

Parents' preferences for their children's activities five years after high school graduation are given in Table 19. As was true for the year after high school graduation, more boys' parents than girls' parents wanted their child to be in the armed services or in a technical school. Working part-time and marriage were more common answers for girls' parents. However, overwhelming these distinctions is the fact that about 65 percent of the students and 70 percent of their parents wanted the child to be working full-time five years after high school graduation. These proportions did not differ greatly by the sex of the student or parent.

Table 19

Parents' Wishes for Child Five Years After High School by Sex of Parent and Child

Plans	For Boys Fathers (N=99)	For Boys Mothers (N=122)	For Girls Fathers (N=100)	For Girls Mothers (N-138
Working full-time	70.7%	74.1%	69.0%	70.3%
Working part-time	2.0	4.5	12.0	14.5
In the armed services	11.1	8.9	3.0	3.6
In a training or apprentice program	7.1	12.5	14.0	8.0
In a technical school	17.2	11.6	8.0	3.6
In or a graduate of a two-year college	16.2	20.5	15.0	18.1
In or a graduate of a four-year college	40.4	40.2	35.0	42.0
Married	13.1	17.9	20.0	23.2
I don't know	5.1	4.5	10.0	5.1
Other	7.1	3.6	7.0	13.0

Thus, one could assume that full-time work is the goal for both boys and girls. Consequently, when discussing plans for future occupations with girls and their parents, one should make sure to inform them of the earning potential of all occupations.

FINDINGS

1. Thirty-eight percent of boys and girls who completed the survey were taking occupational education courses in the tenth grade. Those taking occupational education courses were far more likely than others to plan to take an occupational education course in 11th or 12th grade.
2. Students who planned to take an occupational education course were doing so with parental support. Some of the students who were not planning to take an occupational education course would have had their parents' support if they had done so.
3. Parental occupations differed between students who were and those who were not planning to take an occupational education course.
4. Decisions about occupational education courses were typically influenced by persons of the student's sex. The most influential person in the decision other than the student was usually a family member for boys and the mother or female friends for girls.
5. Boys and girls differed in the degree of support or opposition they expected from parents, guidance counselors and peers were they to choose certain occupational education programs. As anticipated, both girls

and boys expected more support for programs traditionally associated with their own sex. Male friends were perceived as being most opposed to non-traditional programs for boys and girls.

6. Many students seemed unaware of the attitudes of their parents, peers and especially guidance counselors toward occupational education programs in general, and non-traditional programs in particular.

7. Parents' actual reactions to program choices were similar to those perceived by the students and were strongly sex-stereotyped.

8. The most frequently selected reasons for choosing occupational education courses were job-related. Boys seemed more likely to be acquainted with the nature of the work and with people in their field.

9. Both parents and students expected job opportunities to be good-to-average in the students' occupational education fields.

10. A larger proportion of boys than of girls reported holding full-time or part-time jobs. Girls were more likely than boys to indicate that chores at home were their current work responsibilities.

11. Boys and girls had different plans after high school, although about 65 percent of students wanted to be working full-time five years after high school. Larger proportions of girls were interested in college attendance, marriage and part-time jobs. A larger proportion of boys was interested in the armed services.

Consideration of Non-traditional Courses

Of students who completed the tenth grade survey, 64 out of 193 boys (33%) and 114 out of 209 girls (55%) indicated that they had thought about taking a course in which there were few students or no students of their sex, that is, a non-traditional course.

We compared the responses of students who had considered taking a non-traditional course with those of other students. We found a number of differences in race, maternal occupation and family status for boys in these groups; we found no differences in these areas for girls.

Whites comprised a somewhat larger proportion of boys who had not considered taking a non-traditional course than of those who had considered taking one (74.1% against 63.8%). This agrees with the findings of Lewis and Kaltreider (1976). Second, those boys who considered taking a non-traditional course indicated somewhat different maternal occupations from those who did not consider doing so. These differences are shown in Table 20. Clerical and sales occupations were more characteristic of mothers of those students who did consider a non-traditional course. Third, a larger percentage of boys who did not consider taking a non-traditional course than of other boys lived with mother and father

Table 20

Percentage of Mothers in Specific Occupations by Whether Tenth Grade Boy Considered Taking a Non-traditional Course

	Boys	
Mothers' Occupation	Considered Non-Traditional (N=45)	Did Not Consider Non-Traditional (N=87)
Clerical or sales occupations	17.8%	35.6%
Housewife	31.1	12.6

(76.8% against 62.5%). A larger proportion of boys who considered non-traditional courses lived with their mother only (21.9% against 14.3%) or with their mother and stepfather (10.9% against 3.6%). It is not clear why boys who did or did not consider non-traditional courses came from different backgrounds.

We also compared attitudes toward programs perceived by tenth grade students who had or had not considered non-traditional courses. In general, boys who had considered taking non-traditional courses expected more support for such courses from their fathers, mothers, male friends and female friends than boys who had not considered such courses.

Girls who had considered taking non-traditional courses expected more support for such courses from their female friends, and to some degree from their male friends, than girls who had not considered such courses. When examining the girls' expectations for support from their parents and counselors, however, no significant differences (at the .05 level) were found between those who had considered such courses and those who had not.

Non-traditional courses listed by boys and girls who considered taking one or more are given in Tables 21 and 22. It is clear that many students were interested in a variety of non-traditional courses. However, few of the students who indicated that they had considered taking a non-traditional course actually planned to do so.

Forty-six boys and 114 girls listed non-traditional courses they considered taking (Tables 21 and 22). Non-traditional courses that boys and girls actually planned to take are given in Table 23. Assuming that each such course was listed by a different person and that the same students answered both questions, a maximum of 17 of the 46 boys (37%) and 13 of the 114 girls (11%) who considered taking a non-traditional course actually planned to do so. Thus, a larger proportion of girls than of boys indicated that they considered taking a non-traditional course, but few of either sex actually did so.

Why was this the case? Was it a matter of lack of encouragement or actual discouragement? One would expect greater enrollment levels if students felt secure in their choices. It is noteworthy, therefore, that approximately 40 percent of boys and girls who considered taking a non-traditional course indicated that they would be uneasy about doing so.

Table 21

Non-traditional Courses Considered by Tenth Grade Boys

Course	Number who considered course
Home economics	33
Cosmetology	2
Business and Office	11
Total	46

Table 22

Non-traditional Courses Considered by Tenth Grade Girls

Course	Number who considered course
Electronics	26
Drafting	18
Mechanical Drafting	1
Drafting Technology	1
Building Construction or Building Trades	12
Carpentry	1
Woodworking	3
Automotice Services	39
Machine and Metal Industries	7
Agriculture	3
Other Trade and Industrial	3
Total	114

64

Table 23

Non-traditional Courses Tenth Grade Boys and Girls Plan to Take

Courses	Frequency
For Boys	
Home Economics	4
Business and office occupations	13
Total	17
For Girls	
Electronics	1
Electricity	1
Drafting	2
Blueprint reading	1
Machine and metal industries	1
Other trade and industrial	7
Total	13

Furthermore, 51 percent of both boys and girls who considered taking a non-traditional course indicated that no one had encouraged them to do so (Table 24). On the other hand, 76 percent of these boys and 63 percent of these girls indicated that no one had discouraged them from taking the non-traditional course (Table 25). It appears, therefore, that lack of encouragement may be a major factor in the low rate of enrollment in non-traditional courses, despite high interest among students. In addition, discouragement appears to be a factor for girls more frequently than for boys. Furthermore, other factors such as the structure of the programs may play a part.

The sources of encouragement and discouragement for non-traditional course choice are given in detail in Tables 24 and 25. Encouragement is perceived by girls to come most often from female friends, mothers,

Table 24

Sources of Encouragement for Considering Non-traditional Courses by Sex (percentages)

Source	Boys (N=61)	Girls (N=107)
No one	40.8%	50.5%
Mother or stepmother	31.1	27.1
Father	21.3	20.6
Female Friends	14.8	30.8
Sister	11.5	14.0
Male friends	16.4	17.8
Brother	13.1	16.8
Any counselor	9.8	10.3
Any teacher	4.9	5.6
Other person	0.0	6.5

Table 25

Sources of Discouragement for Considering Non-traditional Courses by Sex

(percentages)

Source	Boys (N=59)	Girls (N=105)
No one	76.3%	62.9%
Mother	3.4	15.2
Father	8.5	15.2
Female friends	6.8	10.5
Sister	6.8	6.7
Male friends	16.9	13.3
Brother	5.1	11.4
Any counselor	1.7	10.5
Any teacher	0.0	1.9
Other person	0.0	1.9

fathers, brothers, and sisters in that order. Boys say they are encouraged in considering non-traditional courses most often by their mothers, fathers, male friends, female friends, brothers and sisters in that order. Discouragement is less prevalent but is reported by girls equally often from mother and father and less often from male friends, brothers and home school counselors. Boys are most often discouraged by male friends. On balance, significant people in students' lives are more likely to encourage than discourage non-traditional course selection. The only source of influence which appears equally encouraging and discouraging is that of male friends by boys.

Ways to Encourage Non-traditional Course Choice

These results suggest that an effective method of increasing enrollments of non-traditional students would be to identify those who are already interested and to give them encouragement. A second method would be to build on the positive attitudes perceived by girls from other girls. A third would be to reduce the effect of discouragement perceived from male friends. A fourth would be to reduce the amount of discouragement perceived by girls from their home school counselors, fathers, mothers and brothers.

Tenth grade students were asked to indicate which of a large number of options would help convince them to take a non-traditional course if they were uneasy about doing so. Options and students' responses are given in Table 26.

From the table we can see that almost all the alternatives suggested are capable of reducing uneasiness in a sizeable proportion of the student respondents. A one-year program would encourage fewer students than the other alternatives. Concerns of the students differ by gender. More factors are endorsed frequently by girls. Girls stressed job opportunities, pay, and useful non-job related skills, classroom factors of student friendliness and teacher fairness, and having another girl or female

Table 26

Factors That Would Reduce Uneasiness in Enrolling in a Non-traditional Course by Sex

Factors	Boys (N=126)	Girls (N=149)
Course leads to earning good money	45.2%	49.0%
Course leads to job opportunities	34.1	53.0
Having another student of your sex in the course	35.7	51.0
Female friends in course	37.3	49.0
Male friends in course	49.2	36.9
Knowing students would be friendly	28.6	51.7
Six-week trial	42.1	39.6
Knowing teacher would be fair	19.0	51.7
Learn useful non-job-related skills	26.2	43.6
Parents' approval	26.2	36.2
At least 20% of students of one's sex	34.9	24.8
Course offered at home school	16.7	24.8
Guidance counselors' approval	19.8	21.5
Female friends' approval	21.4	18.1
Male friends' approval	23.8	14.8
One-year program	7.9	12.1
None of these factors would be important	11.9	2.7
Other factors	4.8	3.4

friends in the course. Although boys are also interested in the potential earnings of non-traditional occupations, their most prominent reasons to become less uneasy are having their male friends in the course, and having a six-week trial period.

Consideration should be given to using essentially all the factors--subculture, classroom situation, and long-term skill and occupational prospects--to reduce uneasiness in selecting non-traditional courses. To what extent specific combinations might be especially influential has not been learned, but we have no reason to imagine that any factor operates against another. Thus, the more the better.

FINDINGS

1. Thirty-three percent of boys and 55 percent of girls considered taking a non-traditional course.
2. White boys were less inclined to consider taking a non-traditional course than were boys of other races or ethnic backgrounds.
3. Boys and girls who anticipated more support from others for taking non-traditional courses were more likely to consider taking these courses.
4. Few students actually planned to take non-traditional courses. Lack of encouragement and discouragement reported by students seem likely adverse influences on the decision to take a non-traditional course. People in the closest relationships to a student are the ones most often perceived to encourage or discourage non-traditional choices. Some students receive encouragement. Others receive discouragement. For girls fathers, mothers, brothers and home counselors relatively frequently were sources of discouragement. A high proportion of boys and girls expected discouragement from male and female friends. On balance, mothers and fathers tend to more often be positive than negative. Male friends of boys are almost equally divided between positive and negative. The only people who tend to more often be seen as negative are home school counselors of girls.
5. Ways to encourage non-traditional course choice

differed for girls and boys. Girls indicated that they would be encouraged by job opportunities, friendly students and a fair teacher. Boys indicated that they would be encouraged by the companionship of other boys, even though this would entail a change of boys' attitudes toward non-traditional courses.

CHAPTER IV

OCCUPATIONAL EDUCATION SURVEY RESULTS

This chapter presents findings based on surveys administered to students enrolled in occupational education courses and to their parents. Given that the overall purpose of the project was to identify and examine factors affecting cross-sex enrollment in occupational courses, these two groups are especially important. The Occupational Education Student Survey and the Occupational Education Parent Survey were constructed to elicit attitudes toward enrollment in occupational education courses. By examining the attitudes of the students who decide to enroll in these programs and the involvement in and reactions to such decisions by their parents, insights about the salient variables were gained.

The Survey

The Student Survey is divided into four sections. The first section asks about sex, race, occupational courses that the student has chosen, and levels of satisfaction with that decision. The second section inquires into (a) the student's reasons for choosing a specific occupational course; (b) the persons influential in that decision; (c) the student's perceptions of support for that decision from each parent, the home school counselor, and both male and female friends; (d) whether the student has ever considered taking an occupational course where few students of his or her own sex were represented; and if this was the case, (e) who encouraged or discouraged the consideration. Perceived levels of support from each parent, home school counselor, and friends of both sexes regarding hypothetical choices of various occupational courses are investigated in section three. The final section contains questions pertaining to current occupational status, perceptions of job opportunities after completion of the occupational course, life-plans for both one and five years after high school graduation, and the occupation of each parent. The last question in the survey asks about the student's attitude toward equal sexual representation in his or her occupational program.

The Parent Survey inquires into parents' opinions about their child's choice of courses and hypothetical choices of various occupational education courses. The survey also contains questions about the parents' perceptions of job opportunities following completion of their child's occupational course, and their wishes for their child's life both one and five years following graduation.

These surveys of students and their parents have corresponding formats (containing both open-ended and formed-choice questions) and use nearly identical questions to elicit attitudes toward the decision to enroll in occupational education courses. The complete questionnaires can be found in the Appendix.

The Respondents

Occupational Education Student Surveys were completed by 832 students (589 males and 243 females) at 22 schools (see Table 4, Chapter II.) This represents a 53 percent response rate from boys and 48 percent from girls. These 832 students had attended a total of 121 home schools--a very broad representation of schools.

A total of 1,021 Occupational Education Parent Surveys were returned by students. Thirteen of these were returned by parents of students who did not return Student Surveys. All returns were included in the survey analyses, but we excluded these thirteen from the determination of response rates.

Among the 1,008 surveys from parents of students who returned Student Surveys, 664 were returned by parents of boys and 344 by parents of girls, as shown in Table 27. Approximately 19 percent of the 589 boys and 22 percent of the 243 girls who returned Student Surveys lived in single parent families. Thus the maximum number of Parent Surveys to be expected from students who returned Student Surveys was 1,066 for boys and 433 for girls. The response rates for their parents were therefore 644 out of 1,066 (62%) for boys and 344 out of 433 (79%) for girls.

Table 27

Numbers of Occupational Education Parent Surveys Returned by Sex of Child*

	Of boys	Of girls	Totals
Fathers	312	154	466
Mothers	352	190	542
Totals	664	344	1008

*Only parents whose child returned his or her student questionnaire were included.

The term "parents" included other adults with whom students lived if they did not live with their mothers and fathers. The number of parent surveys completed by adults other than parents or step-parents were 19 by "other" males and 17 by "other" females. In subsequent references to the parent survey in this study, "mothers" refers to all female respondents and "fathers" to all male respondents.

The results of these surveys will be presented in two parts. The general findings applicable to all the students will be discussed first. A more detailed set of three comparisons will be presented to reveal the factors responsible for traditional and non-traditional choices.

General Findings

STUDENTS' REASONS FOR OCCUPATIONAL EDUCATION COURSE CHOICE

Responding students cited all the possible reasons suggested for choosing the occupational education courses in which they are enrolled. However, only ten reasons were chosen by more than ten percent of the respondents (see Table 28).

Table 28

Students' Reasons for Selecting Their Occupational Education Course by Sex*

	Boys (N=562)		Girls (N=234)	
Reasons	Percentage	N**	Percentage	N**
To learn skill and prepare for a job	67.3%	378	70.9%	166
Course sounds interesting	51.2	288	68.4	160
Think I will like the work	49.2	278	63.7	149
Want to try out this field	44.0	247	62.4	146
Good trade with good income	53.2	299	45.7	107
Jobs available in this field	47.2	265	40.6	95
I am good at this type of work	34.9	196	27.4	64
Know people working in field	26.2	147	14.1	79
Course recommended by those who had taken it	19.4	109	19.2	45
Need the credit	12.8	72	11.5	27

* Less than 10% of each group gave any other response

** Multiple answers allowed

Very high proportions of girls and boys say they want to learn a skill and prepare for a job, the courses sound interesting, they think they would like the work they want to try out the field, it is a good trade with a good income, and many jobs are available in it. A moderate proportion feel they are good at that type of work, know people in this kind of work, or have received recommendations on the course by former students. Only a few say they select the course to obtain necessary credits. All but a few students were sure that they wanted to take the occupational course chosen. Over 60 percent were very sure.

Ninety-five percent of the students are satisfied with the occupational education courses they are now taking. Fifty-four percent are completely satisfied.

Of the 589 boys and 243 girls who returned Occupational Education Student Surveys, 60 boys (10.7%) and 10 girls (4.1%) gave reasons for not taking their first choice course. These students were distributed among the four programs with 44 in Construction, 21 in Drafting, five in Electronics, and three in Cosmetology. Seven of the girls were in Drafting and three in Cosmetology. There was no pattern in the responses of girls to the question of why they did not take their first choice course. The primary reason given by the male students was shortage of openings. This was largely due to the responses of male students at one urban school, that offers a large number of courses in Construction and Maintenance Trades. Thirty of the 157 male respondents at this one school indicated that they could not take their first choice course because there were not enough student places available.

One girl who was enrolled in Cosmetology indicated that she had considered taking a non-traditional course, in the Automotive Services area, but had been discouraged by her mother from doing so. She was the only student in a traditional program who indicated that a non-traditional course had been her first choice.

Respondents who were not in their first choice course gave no reasons that indicated overt sex bias. Of course, students prevented from entering any occupational education course due to sex bias were not included in the survey population.

Influences on Course Choice

As we know, the courses in which students were actually enrolled were for the most part traditional for their sex. It is of interest to examine the assistance and influence of others on their choices. In Table 29, we see that the people who most frequently helped girls decide on their current selection were their female peers, their mothers, no one, counselors, fathers, and male peers, in that order. Boys, on the other hand, most frequently cited no one as a source of help, followed in order by fathers, counselors, male peers, and mothers. If we instead look at the most influential person in the decision (see Table 30) we find girls to be most often influenced by no one, fathers and counselors.

Students' Perceptions of Support

The students on the whole perceived widespread support for the occupational education course selection. Mothers, followed by fathers, guidance counselors, female friends, and male friends, were perceived as most supportive of the decision. Twenty-five percent of the students indicated they do not know the attitudes of their guidance counselors and friends; in contrast, only five percent do not know attitudes of parents.

Table 29

Percentage of Students Perceiving Help in Choosing Occupational Course by Source of Help* and Sex

(percentages)

Source of help	Boys (N=560)	Girls (N=254)
No one	45.9%	36.6%
Mother or stepmother	22.3	41.3
Father or stepfather	32.5	20.5
Female friends or sister	8.6	42.9
Male friends or brother	24.6	13.8
Any counselor	26.8	20.9
Any teacher	8.8	4.3
Others	6.4	9.1

* Multiple responses allowed

Students were also asked to project whether they would have received support had they selected any of eight vocational education courses. The sources of support inquired about were parents, friends of both sexes, and guidance counselors (see Table 56 in Appendix for details).

Over 70 percent of boys perceive fathers, male friends, and guidance counselors as supportive toward enrollment in traditionally male courses. Slightly fewer (over 65%) also see their mothers and female friends as similarly supportive. The program most often anticipated to be supported is Electronics. Data Processing is much less often seen to be supported by any of these people. Drafting holds an intermediate position. Of the two traditionally female subjects, Home Economics is perceived by more boys to be supported for themselves than is Cosmetology (significant at .10 level). Guidance counselors, followed by female friends and mothers, are most often thought to be supportive of selecting these subjects. However, this perceived support is still limited. In the opinion of the boys surveyed, approximately one-third of the guidance counselors, the group with the highest levels of potential suport, would be supportive of the choice of Home Economics or Cosmetology. Only 28 percent of the boys think guidance counselors would support the selection of Cosmetology; 37 percent believe counselors would support a choice of Home Economics. Male friends are expected to be the least supportive of studying non-traditional subjects. (Differences reported are tested using chi square and are significant at the .05 level unless stated otherwise.)

Table 30

Greatest Influence on Choice of Occupational Education Course by Sex

	Boys (N=594)		Girls (N=245)	
Source of Influence	Percentage	N	Percentage	N
No one or myself	28.1%	118	25.3%	49
Mother or stepmother	10.0	42	35.1	68
Father or stepfather	22.1	93	4.1	8
Female friends or sister	2.6	11	15.9	31
Male friends or brother	12.7	53	3.1	6
Any counselor	17.1	72	9.3	18
Any teacher	4.5	19	3.1	6
Others	2.8	12	4.1	8

For girls the traditionally female subject areas of Cosmetology and Home Economics are the ones most often anticipated to elicit support. It is interesting that of the two, more support is perceived for Cosmetology, although this difference is generally not significant. Significantly more often than others, mothers and female friends are anticipated to support Cosmetology. Among the other courses, Data Processing is the one most often perceived as supported for girls. Drafting is the course next most often perceived as supported, but perceived support drops by more than 20 percent in each category. Although the traditionally male subjects are least supported for girls, these data show that generally over 23 percent of all the relevant people are perceived to support girls' studying these subjects.

Both boys and girls indicated that their male friends were the persons most opposed to non-traditional programs. This result agrees with the findings of Lewis and Kaltreider (1976).

On a family-by-family basis, a comparison of students' assessments of their parents' attitudes toward programs with the attitudes expressed by the parents showed very close agreement. (Kendall's tau was significant at .05 or better for all comparisons.)

Students' Consideration of Non-traditional Courses

Twenty-three percent of boys and 52 percent of the girls had considered studying couses not traditional for their sex. This difference by sex is no doubt due partly to the wider variety of courses which are presently non-traditional for girls, but it may also reflect greater support for girls to participate in unconventional activities and the response to different job opportunities in the various fields. In spite of this declared interest on the part of numbers of students, few were actually enrolled in such non-traditional courses. There were eight such boys and 47 such girls identified in the sample.

Sources of Encouragement or Discouragement

Few students who had considered taking a non-traditional course experienced encouragement or discouragement for doing so. Of those who answered, 72.3 percent of the boys said no one had encouraged them and 59.5 percent of the girls said the same. For all students the most common sources of encouragement were friends and parents.

Eighty-one percent of the boys and 69 percent of the girls said no one had discouraged them. The next most frequently named source of discouragement for boys was their male friends, named by 11.9 percent of the respondents. Girls exhibited slightly more sources of discouragement, but only mothers (14.8%) and fathers (13.0%) were perceived as discouraging by more than 10 percent of the girls who responded.

Three Types of Comparisons

The surveys completed by occupational education students and parents allowed three major types of comparisons useful for understanding factors leading to non-traditional choices. For students, these are as follows:

1. Comparison of responses of females in programs that are traditional for women with those of females in programs that are non-traditional for women. This comparison was intended to determine whether there were differences between traditional and non-traditional females. There were insufficient numbers of non-traditional males in the sample to allow a comparison of the responses of those in traditional and non-traditional courses.
2. Comparison of responses of traditional students at pairs of schools with high and low cross-sex enrollments in a given program. There were four pairs of schools for which these analyses could be made for programs traditional for males and one pair for which

a similar analysis could be made for a program traditional for females. These comparisons were intended to determine whether there were differences in school climate. For example, were there differences between experiences of traditional students at the high cross-sex enrollment school and of students at the low cross-sex enrollment school?

3. Comparisons of the responses of male and female students at individual schools providing enough responses from non-traditional students. These comparisons were planned to determine whether males and females were treated differently at the same school. Enrollments of and survey returns from non-traditional students were large enough at six schools to make these comparisons.

Parallel comparisons were made of responses of parents.

TRADITIONAL AND NON-TRADITIONAL GIRLS

Over half of the girls enrolled in non-traditional subjects were attending schools in the five large cities whereas over half of the girls enrolled in traditional subjects attended suburban, small city, town, or rural area vocational schools (Table 31). Because students in the large city schools are likely to differ somewhat from students in the less urban schools and in ways that might influence their reactions to our questions, it is necessary to control for the type of school students are enrolled in when comparing girls in traditional and non-traditional programs. One solution would be to categorize students separately by school type. That solution is not possible here due to the increasingly small sample sizes as we introduce other controls to investigate more complex issues. We instead present results in this section where the distribution of students

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in the two types of schools is controlled for numerically. In the sample 54.3% of the girls were attending primarily non-urban schools and 45.7% were attending schools in the five largest cities. Thus, responses of girls in each program from the two types of school are in turn weighted in this proportion.

Table 31

Survey Returns from Girls in Traditional and Non-traditional Programs by Type of School

Type of Program	Character of School		Total
	Large Urban	Other*	
Traditional			
Personal Services	82	114	196
Non-Traditional			
Construction and Maintenance Trades	0	1	1
Drafting	21	17	38
Electronics	8	0	8
Total Non-traditional	29	18	47
Total	111	132	243
Percentage	45.7%	54.3%	100%

* These schools were primarily located in isolated, rural areas, but included some suburban and samll city schools.

All girls in traditional programs were in Personal Services. Girls in non-traditional programs were in Drafting or Electronics, except for one girl in Construction.

Racial/Ethnic Background

There was very little similarity in the racial/ethnic compositions of urban schools and other schools. Consequently, racial and ethnic background as potential factors leading to different choices of subject matter cannot be discussed here.

Reasons for Course Selection

There was substantial agreement in responses from traditional and non-traditional girls on their reasons for course selection. In comparing traditional with non-traditional students, mothers, female friends and sisters were reported as influential by a significantly larger proportion of traditional students. (Table 57 in Appendix gives detailed information.)

Their mothers and girls themselves are the persons most often indicated as having greatest influence on the girls' decisions about an occupational education course. Mothers, female peers and counselors were more often the most important influence on girls in the traditional program than on girls in non-traditional programs. The non-traditional girls most often mention themselves as the greatest influence on course selection. Their male peers and teachers are mentioned more often as their greatest source of influence than they are by traditional girls. This pattern, which can be seen in Table 58 in the Appendix, is quite similar to the pattern of all those who influenced the girls' decisions. One difference between traditional and non-traditional students at the two types of schools was that teachers, especially home school teachers, were listed as most influential by some non-traditional students but by no traditional student.

Consideration of Non-traditional Courses

Of the girls in traditional programs, 33 out of 82 (40%) in urban schools and 56 out of 114 (49%) in the non-urban schools said they had considered taking a course in which there were few or no students of their sex. (The specific courses considered are given in Table 59 in the Appendix.) A wide range of courses was considered, although the most frequently mentioned course was Automotive Services. Nevertheless, these students chose to study a traditional program for girls. The question arises as to whether these girls' experiences differentiate them from girls who actually enrolled in non-traditional programs.

The girls enrolled in the non-traditional programs are not distinguished from those enrolled in traditional programs by the sources of their encouragement or discouragement. However, over half of all girls who indicated that they had considered a non-traditional course said that no one had encouraged them to take that course. This was independent of whether they actually enrolled. On the other hand, nearly 70% of all girls who considered non-traditional courses said no one had discouraged them from doing so. This also was independent of the program they eventually chose (see Tables 60 and 61 in the Appendix for details). As in the tenth grade analyses, these results suggest that students who are considering non-traditional courses be identified and encouraged.

Job Experience

Girls in traditional programs were significantly more likely than girls in non-traditional programs to have a full-time or part-time job, and less likely to take occasional jobs for pay (Table 32).

Table 32

Current Work Responsibilities of Girls in Occupational Education by Type of Program

(percentages)

Work responsibilities	Traditional (N=155)	Non-traditional (N=34)
Full-time job	10.5%*	-- %
Part-time job	48.8	15.7
Occasional jobs for pay	17.6	54.2
Volunteer work	5.9	6.1
Chores at home	24.1	33.7
None	8.4	7.2
Other	---**	---

* Weighted percentages, see text
** Percentages below 5 are not reported

Plans of Students

The traditional program of Cosmetology can lead directly to full-time employment, whereas Drafting and, to some extent, Electronics can be college preparatory courses. Information from the urban school attended by girls in Drafting suggests that these students took drafting because it was a required part of a pre-college technical curriculum. These facts help to clarify the differences in girls' plans immediately after high school (Table 33) and five years after high school (Table 34). Students in the traditional program expressed interest in full-time work significantly more often than did those in non-traditional programs. Girls at the one school with many female drafting students were overwhelmingly interested in attending a four-year college. Consequently, a much higher proportion of non-traditional girls planned to be in college the year after high school graduation and to be attending or to have graduated from a college five years later. In addition, more of the traditional girls plan to be married at each subsequent period. The difference between the groups becomes significant after the five year period.

Table 33

Plans for the Year After High School Graduation of Girls in Occupational Education by Type of Program

(percentages)

Plans	Traditional (N=187)	Non-traditional (N=43)
Work full-time	57.2%*	16.6%
Work part-time	29.1	30.6
Join the armed services	5.5	13.6
Training, apprenticeship or technical school	14.2	16.3
College (2-year or 4-year)	27.7	72.7
Get married	16.9	12.8
Don't know or other	28.1	16.2

* Weighted percentages, see text

Table 34

Plans for Five Years After High School of Girls in Occupational Education by Type of Program

(percentages)

Plans	Traditional (N=186)	Non-traditional (N=44)
Work full-time	69.3%*	53.7%
Work part-time	16.8	16.6
In the armed services	----**	5.1
Training, apprenticeship or technical school	6.7	17.9
College or college graduate	14.2	44.5
Married	46.3	25.8
Don't know or other	22.4	22.4

* Weighted percentages, see text

** Percentages below 5 are not reported

To obtain clearer distinctions between traditional and non-traditional girls, it would be useful to compare two programs such as Cosmetology and Construction that are likley to lead more directly to job entry. Unfortunately, the low enrollment of girls in Construction prevented us from making such a comparison.

Parents' plans for their children were similar to students' plans for the year after high school (Table 35). They differed somewhat for five years after high school (Table 36). Parents were generally less inclined toward their daughters being married than the girls themselves were and more desirous of their working than the girls themselves were.

Analysis of Attitudes Toward Programs

As in the Tenth Grade Surveys, the Occupational Education Student and Parent Surveys included questions concerning attitudes toward choices of

Table 35

Preferences of Mothers and Fathers for Their Daughters' Activiites During the Year After High School by Girl's Type of Program

(percentages)

Plans	Fathers Trad. (N=125)	Fathers Non-trad. (N=30)	Mothers Trad. (N=154)	Mothers Non-trad. N=37)
Work full-time	73.2%*	36.7%	75.7%	33.5%
Work part-time	22.3	12.2	23.4	20.8
Join the armed services	6.7	9.7	---**	6.7
Training, apprenticeship or technical school	26.8	19.8	24.3	30.0
College (2-year or 4-year)	34.9	95.1	37.1	78.2
Get married	6.7	--	5.6	6.7
Don't know or other	10.1	4.8	7.4	1.7

* Weighted percentages, see text
** Percentages below 5 are not reported

Table 36

Preferences of Mothers and Fathers for Their Daughters' Activities Five Years After High School by Girl's Type of Program

(percentages)

Plans	Fathers Trad. (N=124)	Fathers Non-trad. (N=30)	Mothers Trad. (N=153)	Mothers Non-trad. (N=37)
Work full-time	82.9%*	90.4%	79.3%	84.1%
Work part-time	19.3	14.7	9.9	13.7
In armed services	---**	9.7	---	---
Training, apprenticeship or technical school	8.0	---	8.9	11.6
College (2-year or 4-year)	20.7	38.9	24.7	50.7
Get married	22.6	27.0	25.6	23.3
Don't know or other	27.9	7.4	25.4	5.3

* Weighted percentages, see text
** Percentages below 5 are not reported

programs made by the student. Students were asked to report the reaction they would have received from their fathers or male guardians, mothers or female guardians, guidance counselors, male friends and female friends if they had enrolled in eight different programs. Parents were asked to indicate how they would have reacted if their children had enrolled in each of the eight programs. The answers were:

Would have supported it	(scored as a "1")
Would neither have supported nor opposed it	("2")
Would have opposed it	("3")
I don't know	(not averaged into mean score)

For student's perceptions of others' attitudes, we developed mean levels of support or opposition for four groups of girls--girls in traditional and non-traditional programs in the urban schools, and girls in traditional and non-traditional programs in the non-urban schools. We compared mean responses for traditional girls with those for non-traditional girls in each type of school using t-tests, and then combined probability levels for the two types of school. Perceived attitudes differed between non-traditional and traditional students. Table 37 displays comparisons that produced statistically significant results (at .05). Non-traditional students expected greater support for the programs in which they were enrolled (Electronics and Drafting), whereas traditional students expected greater support for their program (Cosmetology) and for Home Economics.

It is not at all clear, of course, whether such differences in perceived support reflect actual differences in levels of support. We therefore compared parents' statements of their degree of support for these programs for traditional and non-traditional students at the two types of schools, and have combined probability levels for the two types of schools.

Female students in traditional courses received greater support from their fathers for Cosmetology, Data Processing and Home Economics, and

Table 37

Girls in Occupational Education Programs Comparisons of Support Perceived by Traditional and Non-traditional Students

Program	Perceived Support by				
	Father	Mother	Guidance Counselor	Male Friends	Female Friends
Automotive Services					
Cosmetology	Trad.*	Trad.	Trad.	Trad.	Trad.
Construction and Maintenance Trades					
Data Processing					
Electronics	N-Trad.**	N-Trad.	N-Trad.	N-Trad.	N-Trad.
Machine and Metal Industries					
Drafting	N-Trad.	N-Trad.		N-Trad.	N-Trad.
Home Economics	Trad.			Trad.	Trad.

* "trad." means greater support was perceived by girls in traditional than in non-traditional programs.

** "N-Trad." means greater support was perceived by girls in non-traditional than in traditional programs.

A blank indicates no significant difference. All comparisons are made using t-tests. Significance level was .05.

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from their mothers for Cosmetology and Home Economics, than did non-traditional female students. Non-traditional female students received greater support from their fathers for Construction Trades and to a lesser extent for Drafting, and from their mothers for Drafting and to a lesser extent for Electronics, than did traditional female students. Thus we have evidence that, retrospectively at least, parents of traditional girls were more supportive of traditional programs and less supportive of non-traditional programs than were parents of non-traditional girls. This evidence heightens the importance of changing parental attitudes toward non-traditional programs if one wishes to increase enrollments of non-traditional students.

We also asked students to indicate the attitudes of their mothers, fathers, guidance counselors, male friends and female friends toward their occupational education course when they selected it. We found that girls in traditional programs expressed greater levels of support from their mothers and female friends than did girls in non-traditional programs. However, parents of traditional and non-traditional female students did not indicate that they had differed in their support for the course at the time the course was selected. Thus, students and mothers disagreed about relative levels of support at the time of course selection. We do not know whether female friends' attitudes to traditional and non-traditional programs differed.

However, both mothers and fathers of traditional female students were more favorable than parents of non-traditional female students to their child's course at the time of the survey; and parents of girls in traditional programs expected better job opportunities for their daughters than did parents of girls in non-traditional programs. Moreover, girls in the traditional program were more sure of their choice of course, and more satisfied with the course they had chosen, than girls in non-traditional programs. However, as will be discussed later within the individual schools traditional and non-traditional students did not differ in course satisfaction. These results appear to indicate a need for continued support of students and for communication with parents once students are enrolled in a non-traditional course.

FINDINGS

1. Large proportions of both traditional and non-traditional girls were assisted in selecting courses by their mothers, female friends, and sisters.
2. A large proportion of girls in the traditional program had considered taking a non-traditional course.
3. A majority of girls who considered non-traditional courses reported that no one had encouraged or discouraged them.
4. Girls in the traditional program were more likely than girls in non-traditional programs to have full-time or part-time jobs.
5. Girls in the traditional program were more likely than other girls to be interested in obtaining full-time work after high school. Many girls in the non-traditional programs were interested in attending college.
6. Parents of traditional girls reported having been more supportive of traditional programs and less supportive of non-traditional programs for their daughters than were parents of non-traditional girls.

7. Parents of traditional female students were more favorable than parents of non-traditional female students toward the type of program their daughter attended at the time of the survey.
8. Parents of girls in traditional programs expected better job opportunities for their daughters than did parents of girls in non-traditional programs.
9. Girls in the traditional program were more sure of their choice of course and more satisfied with it than girls in the non-traditional program were.

TRADITIONAL STUDENTS AT SCHOOLS WITH LOW OR HIGH CROSS-SEX ENROLLMENTS IN NON-TRADITIONAL PROGRAMS

We have discussed differences in the responses of girls in traditional or non-traditional programs. We shall now compare responses of traditional students at pairs of schools with low and high cross-sex enrollments in programs that are non-traditional for the opposite sex. Such comparisons could be made at two schools at which a program was traditional for females and at four pairs of schools at which programs were traditional for males. These comparisons were made to identify differences in school climate between schools with low and high cross-sex enrollments. We also compared the responses of parents at these pairs of schools.

Responses of Girls at Schools with High and Low Enrollments of Boys in Cosmetology

At one urban school, seven males and 130 females were enrolled in Cosmetology (5.1% male). At a school in a rural area, one of 63 students in Cosmetology was male (1.6% male). Racially the two groups were extremely different. Nearly all girls in the low cross-sex enrollment program at the rural school were white; only 22 percent of girls in the high cross-sex enrollment program in the urban school were white. The small difference in cross-sex enrollments may have been largely due to the rural and urban characters of the two schools and to the difference in their racial composition. There were too few boys enrolled in the non-traditional program to comment on their ethnic and racial background.

The lack of substantial contrast in the percentage of boys enrolled in the two programs may mean that there is no essential difference in the school environments. This would account for the fact that although attitudes toward equal enrollment of boys and girls differ by school, these differences are not significant at the .05 level. Until it is possible to have programs with larger proportions of boys in them, the question will remain open as to the effect of large cross-sex enrollments on the school environment and on the other students. (For details see Table 62 in the Appendix.)

Analysis of Attitudes Toward Programs

We compared mean responses of girls from high and low cross-sex enrollment programs concerning attitudes attributed to parents, guidance counselors, and male and female friends. The only difference (at .05) between mean responses of students was that girls at the high cross-sex enrollemnt school expected more support from their home school guidance counselor for enrollment in Automotive Services, Data Processing or Drafting. There were no significant differences in levels of support reported by parents of girls at the two schools. Although a large proportion of girls at the low cross-sex enrollment school who had considered taking a non-traditional course reported discouragement for doing so, because of the small numbers this difference is not significant. (For details see Table 63 in the Appendix.)

In addition, girls at the high cross-sex enrollment school reported being somewhat less satisfied with their occupational education courses than girls at the other school.

Responses of Boys at Schools with High and Low Enrollments of Girls in Drafting or Electronics

Four pairs of schools were included in this analysis. Three pairs were from the Drafting program, and one was from Electronics. Two of the schools having high cross-sex enrollments are college preparatory technical schools.

The contrasting cross-sex enrollment percentages for the four programs are: 33.3% and 8.7%, 30.0% and 5.3%, 21.6% and 8.0%, and 12.5% and 0.0%. Comparisons were made for each pair of schools; results were then combined over pairs of schools. For example, in comparing mean attitudes we performed t-tests of mean attitudes for each pair of schools and then combined significance levels across pairs of schools. If fewer than four persons in any group responded to a question, that pair of schools was omitted from the analysis for that question.

We found no consistent differences across these pairs of schools in the grade level of students, the grade at which students started taking occupational education courses and the proportions who had considered taking non-traditional courses. There were few racial minority members at three of the pairs of schools. In the one pair having minority group members the proportion of whites was higher at the school with the higher cross-sex enrollment program than at the other.

One difference obtained was that boys in low cross-sex enrollment schools were more likely than boys in other schools to indicate that they would favor equal numbers of boys and girls in their occupational education courses. This comparison excluded one pair of schools because there were too few responses from one of them. Although boys in high cross-sex enrollment schools were more likely than other boys to indicate that they would not like equal numbers of boys and girls in their program or that it would not matter to them, differences between the schools are not significant at the .05 level. This is the same as the result obtained for girls in high and low cross-sex enrollment schools (see Table 63 in the Appendix).

Traditional students in low cross-sex enrollment schools seem at least as favorable to non-traditional students as traditional students in high cross-sex enrollment schools. Little opposition was expressed to non-traditional students. We shall discuss this matter further in the next section.

Analysis of Attitudes Toward Programs

Boys at high and low cross-sex enrollment schools perceived different degrees of support for certain occupational education programs. As shown in Table 38, boys at high cross-sex enrollment schools perceived greater support (or less opposition) than other boys did from their fathers for Drafting and Home Economics, from their mothers for Cosmetology and Home Economics, and from their female friends for Drafting and Automotive Services. (The difference for Automotive Services was caused by a large difference at two schools.) These differences suggest that there was greater support for non-traditional courses for boys at schools in which non-traditional enrollments of girls were relatively high. This support was expected from parents in particular.

We therefore compared parents' responses at pairs of high and low cross-sex enrollment schools. We received enough parent surveys to make these comparisons for two pairs of schools. Although different levels of parental support for non-traditional programs were expected by boys at high and low cross-sex enrollment schools, there were no significant differences (at .05) between the responses of the two groups of parents.

Finally, boys at schools with higher cross-sex enrollments reported being less sure than others that they wanted to take their occupational education course when they enrolled in it. Furthermore, they were less satisfied with the course that they were taking than boys at the low cross-sex enrollment schools.

Table 38

Comparisons of Support for Specific Programs Perceived by Boys at Schools with High and Low Enrollments of Girls in Drafting and Electronics

			Perceived Support by		
Program	Father	Mother	Guidance Counselor	Male Friends	Female Friends
Automotive Services					High**
Cosmetology		High*			
Construction and Maintenance Trades					
Data Processing					
Electronics					
Machine and Metal Industries					
Drafting	High				High
Home Economics	High	High			

* "High" means greater support was perceived by boys at schools having higher enrollments of girls in Drafting or Electronics.

** Effect was caused by a large difference at one pair of schools.

A blank indicates no significant difference.

FINDINGS

1. The school with a larger enrollment of boys in Cosmetology was urban rather than rural, racially diverse rather than predominantly white.
2. Girls at the school with greater enrollment of boys in the non-traditional program expected more support from their home school guidance counselor for their own enrollment in certain non-traditional programs than the girls at the school with fewer boys enrolled in non-traditional programs.
3. Boys in traditionally male programs at higher cross-sex enrollment schools perceived greater support from their parents for certain traditionally female fields than did boys at schools with low cross-sex enrollments. However, no significant difference was observed in parents' stated levels of support.
4. Traditional students at schools with higher cross-sex enrollments reported being less satisfied with their course than their counterparts at schools with lower cross-sex enrollments.

BOYS AND GIRLS IN PROGRAMS WITH HIGH CROSS-SEX ENROLLMENTS

In order to determine whether boys and girls were treated differently or had different attitudes or experiences at the same school, we compared responses of boys and girls at schools that provided enough responses from non-traditional students. We also compared the responses of parents. Comparisons were made for each school and then combined over five schools that have non-traditional programs for girls. A separate analysis was made of the responses of boys and girls and their parents at the school having a non-traditional program for boys. If fewer than three students from any subgroup answered a question, that school was omitted from the analysis of responses to the question.

Responses of Students in Schools with High Cross-Sex Enrollments

It is important that, whether in a program traditional or non-traditional for their sex, students at the same school did not differ significantly in their satisfaction with their occupational education courses. Girls in non-traditional programs, however, had been somewhat less sure than boys in these programs that they would like the course when they selected it.

Persons who helped students decide on their choice of an occupational education course were the same for students of both sexes. It is interesting that the home school counselor was frequently indicated as the one who helped by both traditional and non-traditional students at the three rural schools that had high cross-sex enrollments. At all five schools in which the program selected was non-traditional for girls, the father was listed as the one who helped decide on a course by a somewhat larger percentage of traditional boys than of non-traditional girls.

A few traditional students and no non-traditional students were enrolled in programs in their parents' occupational area. The occupations of five boys' fathers and of one girl's mother were in the same field as the student. Thus one major source of influence--parental occupation--does not appear to have played a strong role in non-traditional course choice. This is unfortunate because of the large effect that could result if fathers, for example, tried to interest their daughters in their fields. This effect has been substantial in Engineering, where an estimated 32 percent of women who were enrolled as college freshmen in Engineering were daughters of male engineers (Ott, 1978a).

There were no consistent differences in the persons that boys and girls indicated as the greatest influence in their decision about an occupational education course.

We have already discussed attitudes of boys in low cross-sex enrollment programs that were non-traditional for girls toward equal enrollments of boys and girls in their programs. We shall now consider the attitudes of boys and girls in the five high cross-sex enrollment programs that were non-traditional for girls. None of the girls objected to equal enrollment, but nine out of 140 boys (6.4%) in these programs indicated that they would not like equal enrollments of boys and girls. The percentages of boys expressing opposition were quite similar across schools.

There were some differences between the responses of boys and girls in non-traditional programs for girls concerning reasons for selecting one's occupational education course although none of these differences were statistically significant. At all five schools as with the total sample, larger proportions of boys than girls said that (a) they were good at this kind of work, or (b) it's a good trade with a good income. In contrast to the entire sample, larger proportions of girls than of boys indicated that one of their reasons was that (c) there are jobs available in the field. At four out of five schools, larger proportions of boys said that (d) their parents convinced them to take the course, whereas larger proportions of girls indicated that (e) they wanted to try out the field. Points (a) and (e) indicate that boys who chose these courses felt somewhat more familiar with the field than girls did. Both boys and girls were interested in the economic benefits of training, boys in terms of a good income and girls in terms of job availability. It is not surprising that larger proportions of boys than of girls indicated that their parents convinced them to take the courses, since these courses were traditionally for males.

Among students in programs non-traditional for girls, girls were more likely to have occasional jobs for pay while boys were more likely to have regular part-time jobs. Once again we see that more boys than girls have formal work experience while in high school (see Chapter III.

For students in programs non-traditional for girls, plans for the year after high school differed by sex of student. Larger proportions of boys than girls planned to work full-time in their occupational education field. Plans for five years after high school graduation also differed for boys and girls: larger proportions of boys, both in traditional and non-traditional programs, than of girls planned to work full time in their occupational education program, although this difference was not statistically significant. Even in programs that were non-traditional for girls, larger, although not statistically significantly larger, proportions of boys than of girls planned to enter the armed services. It appears that boys were more likely than girls to be taking their occupational education course as a preparation for full-time work in their occupational education field; they were more interested than girls in the armed services, an historic source of occupational training for men.

Parent surveys were only available from four schools having high cross-sex enrollments for girls. There were no consistent differences between the responses of fathers of boys and of girls in regard to plans for the year after high school. At three of the schools, larger proportions of mothers of boys wanted their child to be working full-time in the student's occupational education field, and larger proportions of mothers of girls wanted their child to be working full-time in another field. Thus the mothers' responses were similar to those of the students.

Parents' preferences for the child's activities five years after high school graduation differed by sex of student. Among students in programs non-traditional for girls, smaller percentages of boys' fathers than of girls' fathers wanted their child to be married. A few boys' fathers and no girls' fathers at each school wanted the child to be in a training or apprentice program. Somewhat larger proportions of girls' mothers than of boys' mothers wanted the child to be working full-time outside the occupational education field.

Analysis of Attitudes Toward Programs

Non-traditional girls indicated more support from their male and female friends for their selection of course than did traditional girls. There were no significant differences in support for one's course attributed to parents or home school guidance counselors. Further, there was no significant difference in perceived support for one's course for non-traditional boys and traditional girls. Parents of boys and girls in these classes did not report differences in their support for their child's selection of course, either at the time of selection or when the survey was completed.

However, girls in non-traditional programs perceived less support from parents and peers than boys did and perceived more support than boys for programs traditional for girls (Table 39). Moreover, attitudes reported by parents of these students coincided with what the students expected (Table 40). There were also some differences in the attitudes perceived by boys and girls in the Cosmetology program toward their enrollment in certain programs (Table 41). Boys and girls perceived the same amount of support towards their enrollment in Cosmetology itself. Parents of male and female Cosmetology students did differ in their attitudes toward their child's enrollment in Cosmetology. Boys' fathers were less supportive than were girls' fathers, and boys' mothers were less supportive of their enrollment in both Cosmetology and Home Economics than were girls' mothers.

Thus traditional and non-traditional students responded differently to questions about their present course and about occupational education programs. In any case, parents of occupational education students did indicate sex-stereotyped attitudes toward programs, as did parents of tenth grade students, and students were apparently aware of these attitudes. Traditional boys and non-traditional girls differed in the attitudes toward these programs that they attributed to their male and female friends.

Table 39

Comparisons of Support for Specific Programs Perceived by Boys and Girls in Occupational Education Programs that are Non-traditional for Girls

	Perceived Support by				
Program	Father	Mother	Guidance Counselor	Male Friends	Female Friends
Automotive Services		Boys*		Boys	Boys
Cosmetology	Girls**	Girls	Girls	Girls	Girls
Construction and Maint. Trades	Boys	Boys		Boys	Boys
Data Processing					Girls
Electronics	Boys	Boys		Boys	
Machine and Metal Industries	Boys	Boys		Boys	Boys
Drafting	Boys			Boys	Boys
Home Economics	Girls	Girls		Girls	Girls

* "Boys" means greater support was perceived by boys than by girls.

** "Girls" means greater support was perceived by girls than by boys.

A blank indicates no significant difference.

Table 40

Parents of Students Enrolled in Programs Non-traditional for Girls
Comparisons of Support for Their Children's Enrollment
in Specific Programs

Program	Support by Father	Support by Mother
Automotive Services	Boys*	
Cosmetology	Girls**	Girls
Construction and Maintenance Trades	Boys	Boys
Data Processing		
Electronics	Boys	Boys
Machine and Metal Industries	Boys	Boys
Drafting		Boys
Home Economics	Girls	Girls

* "Boys" means greater support was given by parents of boys than of girls.

** "Girls" means greater support was given by parents of girls than of boys.

A blank indicates no significant difference.

Table 41

Boys and Girls in Cosmetology
Comparisons of Support They Perceived for Specific Programs

	Perceived support by				
Program	Father	Mother	Guidance Counselor	Male Friends	Female Friends
Automotive Services		Boys*			
Cosmetology					
Construction and Maint. Trades					
Data Processing					
Electronics				Boys	
Machine and Metal Ind.	Boys	Boys			Boys
Drafting					
Home Economics					Girls**

* "Boys" means greater support was perceived by boys than by girls.

** "Girls" means greater support was perceived by girls than by boys.

A blank indicates no significant difference.

FINDINGS

1. Whether enrolled in programs traditional or non-traditional for their sex, students did not differ significantly in their satisfaction with their occupational education courses.
2. Home school counselors were helpful in course selection to both boys and girls at non-urban schools.
3. Fathers were helpful in course selection to larger proportions of boys than of girls in traditionally male programs.
4. No student in a non-traditional program was enrolled in a program in the occupational area of a parent.
5. A small percentage of traditional boys and no non-traditional girls indicated they would dislike equal enrollments of boys and girls.
6. Among students enrolled in traditionally male programs, girls were more likely to have occasional jobs for pay, whereas boys were more likely to have regular part-time jobs.
7. Work plans differed by sex. Boys in traditionally male programs were more likely than girls to plan to work full-time in their occupational education field, whereas girls were more likely than boys to plan to work full-time outside their occupational education field. Mothers' plans for their children were similar to students' plans.
8. Parents indicated sex-streotyped attitudes toward programs, and the students perceived these attitudes accurately.

9. Traditional boys and non-traditional girls perceived different peer attitudes toward programs. These differences were sex-stereotyped, with greater support expected by boys for programs that were traditional for boys, and greater support expected by girls for programs that were traditional for girls.

CHAPTER V

JOB OPPORTUNITIES

One reason for attempting to overcome sex-role stereotyping in occupational education programs is the role such stereotyping plays in restricting women to lower paying fields with fewer job opportunities. For example, the job outlook in New York State in the predominantly female program of Cosmetology is poorer than the average job outlook in the state for all occupations.[1] However, the three programs that we studied in which boys formed the majority of students (Construction, Drafting, and Electronics) have good job outlooks statewide.

We noted earlier that both boys and girls indicated that job opportunities were one of the reasons that they chose courses in particular occupational education fields. Because of the contradiction between students' interest in job opportunities and their selection of fields lacking good job prospects, we obtained estimates of job opportunities from students, parents, teachers and counselors, and compared these estimates with the occupational projections. Our aim was to see whether these persons indicated job opportunities accurately, and thus to determine whether additional information and counseling were necessary.

Occupational education students and tenth grade students planning to take an occupational education course were asked to indicate their ideas of local job opportunities in their field when they completed their occupational education course. Allowed responses were as follows:

1. excellent
2. good
3. average

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[1] The job outlook or occupational projection is the percentage change in numbers of persons employed in a field projected from 1974 to 1985. These projections are available for nine regions of the state, and for the state as a whole (Occupational Projections, Labor Research Report, New York State Department of Labor, 1978).

4. not good
5. poor
6. I don't know (not averaged into mean response).

A similar question on the parents' survey asked for their assessment of their child's opportunities. Occupational education teachers were asked to indicate job opportunities for boys and girls in the local area after students completed the teacher's course or courses. Finally, occupational education and tenth grade counselors were asked to estimate job opportunities in the local area for students who completed occupational education courses in one of eight programs (Automotive Services, Cosmetology, Construction Trades, Data Processing, Electronics, Machine and Metal Industries, Drafting, and Home Economics). Teachers' and counselors' responses will be discussed in Chapter VI.

STUDENTS' AND PARENTS' EXPECTATIONS

Tenth grade boys and girls did not differ in the job opportunities they expected. (The mean response was 2.27 for each sex.) Fathers of boys and of girls and mothers of boys and of girls did not differ significantly in expectations about job opportunities for their children. The responses were not significantly different for boys or girls, even though tenth grade boys and girls planned to take very different occupational education programs (see Chapter III).

The occupational education surveys permit a comparison of expected job opportunities in the four programs included in this study (Table 42). On the average, students' expected job opportunities were almost identical for construction, electronics and cosmetology, and were somewhat lower in drafting. However, as indicated in Table 42, the projected statewide increases in employment for 1974 to 1985 differ for these fields. The statewide job outlook is not good in cosmetology, average to good in construction, and good in drafting and electronics. Students' expected job opportunities do not match these statewide projections.

Table 42

Expected Job Opportunities Reported by Occupational Education Students vs. Projected Increases State-wide

Student's Program	Students' Expected Job Opportunities*	Statewide Projected Increases (1974-1985)
Construction	2.17 (N=252)**	6.3% to 15.6%***
Drafting	2.48 (N=147)	19.4
Electronics	2.15 (N=144)	15.0 to 24.5
Cosmetology	2.14 (N=180)	2.9

* 1 = excellent
2 = good
3 = average
4 = not good
5 = poor
** Mean values
*** Percentages

Fathers and mothers of these students gave similar ratings of job opportunities within their child's program (Table 43). Fathers and mothers agreed with the students in regard to opportunities in drafting, electronics and cosmetology. Students expected better opportunities in construction than parents did. Parents and students overestimated the job opportunities in cosmetology, underestimated the job opportunites in drafting, and correctly estimated the opportunities in electronics. Parents, but not students, were correct in their estimates of job opportunities in construction.

For each school, students' and parents' assessments of job opportunities were also compared with projections for their local area (Table 44). No projections were available for rural areas which included six of the schools. In Table 44, the smaller the value of the expected job opportunity, the better the expected opportunities.

Table 43

Expected Job Opportunities Reported by Parents of Occupational Education Students

(mean values)

Student's Program	Expected Job Opportunities* Fathers		Mothers	
Construction	2.45	(N=118)	2.41	(N=127)
Drafting	2.54	(N=84)	2.56	(N=96)
Electronics	2.07	(N=91)	2.14	(N=101)
Cosmetology	2.06	N=119)	2.01	(N=141)

* 1 = excellent
2 = good
3 = average
4 = not good
5 = poor

As is evident in Table 44, there is a great deal of variation from area to area in occupational projections for a specific field, such as carpentry. Second, occupational projections for cosmetology are more favorable in the two areas included in the table than in the state as a whole. In the two schools included in this table, students' and parents' assessments of job opportunities in cosmetology were fairly accurate. Third, for construction, drafting, and electronics, there was little correspondence between the occupational projections for a local area and job opportunities expected by students and parents.

In a final attempt to explain parents' and students' expectations about job opportunities, we considered whether they might have been giving us estimates that reflected the opportunities relative to all fields in their local area. Thus, for example, the projected increase in Buffalo

Table 44

Expected Job Opportunities Reported by Students and Parents vs. Occupational Projections for Local Areas

Program/Area	Course	Occupational Projections (1974-1985) (percentages)	Expected Job Opportunities Students	Fathers	Mothers
			(mean values)*		
Construction					
Syracuse	Air Conditioning & Refrig.	+27.3			
	Carpentry	+13.2			
	Heating	- 1.2			
	Masonry	+20.4			
	Plumbing	+29.7			
	Mean Value	+17.9	2.14	2.46	2.43
Nassau-Suffolk	Cabinetmaking	+ 0.9	2.32	2.50	2.48
	Building Trades	+14.4	2.33	2.69	2.23
Buffalo	Air Conditioning & Refrig.	+15.7			
	Building Trades	+ 7.4			
	Carpentry	+ 7.5			
	Sheet Metal & Building Construction	- 5.4			
	Sheet Metal Technology	- 1.0			
	Mean Value	+ 4.8	2.26	2.40	2.64

* 1 = excellent
2 = good
3 = average
4 = not good
5 = poor

Table 44 (cont.)

Program/Area	Course	Occupational Projections (1974-1985) (percentages)	Expected Job Opportunities Students	Fathers (mean values)	Mothers
New York City	Carpentry	-11.3			
	Climate Control	+10.2			
	Millwork & Concrete Forms	-27.7			
	Plumbing	+ 0.1			
	Mean Value	- 7.2	1.67	2.00	2.00
Drafting					
Buffalo	Trade Drafting	+16.0	2.64	2.85	2.86
Binghamton	Trade Drafting	+10.4	2.20	2.25	2.89
Albany	Drafting	+17.9	2.22	**	2.25
New York City	Technical Drawing	+ 6.8	2.27	2.09	2.30
Electronics					
Rochester	Electronics	+11.9	2.28	1.85	1.91
Rochester	Electronics	+11.9			
	Radio & TV	+36.5			
	Mean Value	+24.2	2.25	2.13	2.07
Nassau-Suffolk	Communications	*			
	Electronic Servicing	+95.3	2.00	2.20	2.36

* Not available
** Two or fewer responses

Table 44 (cont.)

Program/Area	Course	Occupational Projections (1974-1985) (percentages)	Expected Job Opportunities (mean values)		
			Students	Fathers	Mothers
Electronics					
Buffalo	Electronics	+41.8			
	Computer Electronics	+ 9.6			
	Mean Value	+25.7	2.00	2.09	2.21
Westchester-Rockland	Radio & TV Repair	+32.2			
	Small Appliance Repair	+25.2			
	Mean Value	+28.7	2.50	**	**
Personal Services					
Nassau-Suffolk	Beauty Culture	+22.5	2.06	1.69	1.83
Rochester	Cosmetology	+16.6	1.95	2.00	2.05

** Two or fewer responses

for all types of employment between 1974 and 1985 is 4.8 percent. Compared with this figure, the projected increase of 16.0 percent in trade drafting would be good to excellent. However, a comparison of occupational projections for each field with those for total employment in the local area (Table 45) did not explain the discrepancies between the projections and students' and parents' assessments of job opportunities. Students and parents apparently need additional information and counseling about job opportunities.

Table 45

Percentage Change in Total Employment 1974 - 1985 by Area (projected)

Area	Percent
Nassau - Suffolk	+26.3
New York City	- 9.7
Albany	+10.3
Westchester - Rockland	+17.9
Buffalo	+ 4.8
Binghamton	+10.1
Rochester	+13.1
Syracuse	+14.9
Utica - Rome	+ 5.3

Source: Occupational Projections, Labor Research Report, New York State Department of Labor, 1978.

CHAPTER VI

TEACHER AND COUNSELOR SURVEY RESULTS

Federal legislation of the 1970s has charged educational institutions with eliminating sex discrimination and sex stereotyping in school policies, programs and activities. In meeting the requirements of this legislation, teachers and counselors as well as administrators carry responsibilities for eliminating sex bias and sex discrimination and for promoting equitable treatment for students of both sexes. Since vocational education programs reflect existing occupational stereotyping, the present study focuses on factors affecting student choice. One aspect of this effort involves an examination of the attitudes of teachers and counselors toward non-traditional enrollments, current practices that promote or discourage such enrollments and suggestions for decreasing sex-stereotyping in occupational programs. The findings from this examination are presented in this chapter.

Teacher Survey

Information about teachers' attitudes, characteristics and suggestions for change was obtained through a self-report survey. A questionnaire containing open-ended and multiple-response items was constructed, based on interviews with teachers in phase 1 and on previous research, particularly the study of influences on student choice of non-traditional vocational programs by Lewis and Kaltreider (1976).

Both occupational education teachers and teachers of general tenth grade classes were surveyed. Although a different form of the questionnaire was used for each group, both forms contained identical questions. We wanted to determine four things: (a) the teachers' attitudes in regard to cross-sex enrollment in vocational education courses, (b) their perceptions of current practices in their schools that foster or hinder cross-sex enrollment, (c) their suggestions for increasing cross-sex enrollments, and (d) their past participation in sex-equity training.

The questionnaire for the occupational education teachers also contained questions on the teacher's perception of job opportunities in his or her field and a description of efforts that the teacher had made to increase enrollment of the underrepresented sex in his or her course. Copies of forms used in the survey are appended to this report.

Counselor Survey

A self-administered, written questionnaire was developed to determine the perceptions and attitudes of counselors at occupational education schools and feeder schools toward enrollment of students in nontraditional programs. Survey questions were essentially the same for both groups of counselors. These questions were based on exploratory pilot test interviews held with counselors. They covered counselors' perceptions of the recruitment process in occupational education and the role of the counselor, perceptions of current practices in their school that foster or hinder cross-sex enrollment, attitudes toward cross-sex enrollment, estimates of job opportunities for girls and for boys in specific occupational fields, and previous participation in sex-equity programs. Several questions resembled those on the teacher surveys, to permit comparisons between teachers' and counselors' responses.

The Sample

The sample consisted of teachers and counselors of those students surveyed in occupational education and tenth grade classes. In general, the selected occupational education classes represented high and low cross-sex enrollment in the four program areas. Tenth grade classes were chosen from the feeder schools for each occupational education school. The sole criterion used in the selection of respondents was that they taught or counseled classes that fitted the characteristics desired for the survey. This permitted comparisons among teachers, counselors, students and parents. A more complete description of the school selection process is provided in Chapter II.

TEACHERS

Completed questionnaires were received from 46 teachers of occupational education at 23 schools and 17 teachers of tenth grade students. Since the sample of the tenth grade teachers is too small to permit extensive analysis, responses from the two groups of teachers have been combined for identical questions.

Sixteen of the tenth grade teachers taught either social studies or English; the remaining respondent was a health teacher. Occupational education teachers represented the four programs chosen for study: Electronics, Cosmetology, Drafting, and Construction and Maintenance Trades. The tenth grade teachers were fairly evenly divided between males and females. In contrast, 37 of the 46 occupational teachers were males, the sex traditional for three of the programs. Only one teacher, a female drafting instructor, was in a field not traditional for her sex (see Table 46).

Table 46

Sample of Teachers by Subject Area and Sex

Subject Taught	Sex of Teachers			
Tenth Grade Teachers	Male	Female	No ans.	Total
English	2	4	1	7
Social studies	7	2	0	9
Health	0	1	0	1
Total	9	7	1	17
Occupational Education Teachers				
Electronics	9	0		9
Cosmetology	0	8		8
Drafting	12	1		13
Construction and Maintenance Trades	15	0		15
Unknown	1	0		1
Total	37	9		46

Teachers were asked to report the total numbers of male and female students in their classes. The tenth grade classes were composed of similar numbers of males and females. Since occupational education classes were chosen for inclusion in the study on the basis of high and low cross-sex enrollments, teachers' reports reflect these unequal distributions (see Table 47). Nineteen teachers reported teaching only males in their classes; three taught only females. Another 21 occupational teachers had males and females in classes representing each of the four program areas under study. Three teachers did not give the sex of the students in their classes. When the goal of federal legislation was applied, that is, at least 20 percent of the underrepresented sex in classes, only nine classes met the standard. Eight of these classes were in Drafting; the remaining class, in the general area of Electronics, was titled "Computer Electronics." No class in Cosmetology or Construction and Maintenance Trades had 20 percent or more enrollees of the non-traditional sex, even though nine of the 22 teachers surveyed from these programs said that they taught some students of the non-traditional sex.

Table 47

Sex Composition of Occupational Education Classes

Subject	All Male	All Female	Both male and female with Underrepresented Sex		Total
			Less than 20%	More than 20%	
Electronics	7	0	0	1	8
Cosmetology	0	3	5	0	8
Drafting	2	0	3	8	13
Construction and Maintenance Trades	10	0	4	0	14
Total	19	3	12	9	43

COUNSELORS

Survey forms were received from 43 counselors in 17 schools with occupational education programs and 17 counselors in 13 schools with 10th grade students. Since the total number of respondents among tenth grade counselors is small, where appropriate the two groups of counselors are combined for analysis.

Two-thirds of all counselors surveyed were male. However, almost all respondents counseled both male and female students; four counselors reported that they counseled only male students. Since all these counselors are associated with occupational schools, it is not known whether this reflects division of counselor responsibilities along program lines or by sex of student.

The counselor-student ratio reported by respondents appears high (1 to 378 for occupational education counselors; 1 to 403 for tenth grade counselors). However, the range in the total number of students counseled was broad. Among the occupational education counselors surveyed, the number of students varied from 67 to 1,400. All but two of these counselors counseled 625 students or fewer; these two counselors reported the high totals of 1,400 students and 1,100 students. Among tenth grade counselors, the total number of students ranged from 200 to 650.

Policies and Practices to Diminish Sex-Stereotyping

IN-SERVICE TRAINING

Studies of sex-stereotyping in educational institutions frequently recommend in-service training for teachers, counselors and other school personnel to increase awareness of sex bias and to promote positive actions and policies toward its elimination. In the present study, teachers and counselors were asked to report their participation in any faculty development activities centered on sex-equity topics. Most of the teachers surveyed said they had received no such training. Only two tenth grade teachers had taken part in any training activities. However, approximately one-fourth (N=11) of the occupational education teachers reported participation in sex-equity programs or workshops sponsored by the State Education Department, BOCES, local in-house faculty, and Cornell and other universities.

Although counselors were more likely to have had some type of in-service training than teachers, over half of the counselors said they had not participated in any sex-equity programs or workshops. For the 38 percent of the counselors who had had this experience, the specific types of workshops they had attended included the following: State Education Department workshops, professional association workshops, BOCES sex-equity workshops, City University of New York sex-equity conferences and other college or university workshops (listed in descending order of frequency).

These findings indicate that despite the emphasis in the research literature on addressing problems of sex-stereotyping through faculty development activities, the majority of those surveyed in the present study had not participated in any workshops or training activities. Of those who had attended, the participant was more likely to be a counselor. However, it is not known to what extent this situation reflects a lack of sufficient training opportunities, especially at the local level. Several of the activities named by participants were statewide in their focus, possibly restricting attendance through space and cost limitations.

Attitudes Toward Non-traditional Enrollments

TEACHER ATTITUDES

Both tenth grade and occupational teachers were asked whether they thought girls and boys should be encouraged to take courses in a field non-traditional for their sex. This question varied slightly for each group of teachers. Occupational education teachers were asked: "Do you think girls (boys) should be encouraged to take courses in the field which you teach?" Tenth grade teachers were asked a more general question about the four program areas under examination, that is, whether they thought girls should be encouraged to take courses in construction and maintenance, drafting, and electronics, and whether boys should be encouraged to take courses in cosmetology and home economics. Although general teacher responses favored non-traditional enrollments, a few exceptions were noted. Both tenth grade and occupational education teachers unanimously agreed that boys should be encouraged to pursue non-traditional programs. For girls, the agreement was not unanimous. Four occupational education teachers (representing three teachers from Construction and Maintenance Trades and one from Drafting) responded in the negative; two other teachers (one Construction and Maintenance Trades and one tenth grade English teacher) said that they didn't know."

COUNSELOR ATTITUDES

The perceptions and attitudes of the counselors toward non-traditional enrollments were assessed in two questions, one specifically applicable to males; the other, to females. When counselors were asked "Do you think it is a good idea to encourage girls to take courses in construction and maintenance trades, drafting and electronics, and other fields in which girls are less than 20 percent of the enrollment," 88 percent of the counselors said "Yes." The question concerning boys was similar, except the example employed was "courses in personal services and in home economics." This question yielded a "Yes" response from 92 percent of the guidance counselors. These responses are close to those of the teachers, 92 percent of whom thought girls should be encouraged to take non-traditional courses and 100 percent of whom thought boys should be encouraged in non-traditional fields.

Counselors were asked to support their opinions of non-traditional enrollments by indicating "Why or why not" encouragement should be provided. Since the questions were open-ended, counselors generally gave multiple reasons for their opinions. Most of the counselors who believed that non-traditional enrollments should be encouraged gave reasons which reflect commitment to providing equal occupational opportunities for males and females (e.g., "availability of good jobs," "job satisfaction," increased earnings"). Many of the counselors who gave negative responses concerning encouragement also stated reasons that were presented in terms of concern for the individual student. Examples include "overcrowded field" and "not if women cannot compete adequately with men." A more complete breakdown of these responses is shown in Table 48.

It was noted that many counselors qualified their statements of whether males and females should be encouraged to pursue non-traditional fields of study. There was particular concern that students should have the necessary aptitude or interest for the specified occupation. This feeling was expressed somewhat more often for girls (mentioned by 16 counselors) than for boys (mentioned by 9 counselors). While these totals are too small to warrant statistical analysis, there was a tendency for counselors to cite more qualifications for girls as well as to mention reasons for not providing encouragement.

Recruitment of Students for Occupational Education

Through their contacts with students, both teachers and counselors have many opportunities to influence the vocational plans of individual girls and boys. Counselors can assist students with vocational choices and provide encouragement and support for those considering non-traditional occupations. Teachers who have daily contact with students in their classes can convey positive feelings and attitudes toward non-traditional students--a source of further support for their decisions.

Table 48

Counselors' Reasons for Encouraging or Discouraging Non-traditional Enrollments
(N = 60)

Reasons for encouragement	For Females N	For Males N
Increase career options	17	18
Increase job satisfaction or success	13	13
Good jobs or good pay	10	11
Attain vocational goals/life skills	8	7
Provide equal opportunity	5	5
Diminish occupational sex-role stereotyping	2	4
Improve programs through increased competition	2	1
Stabilizing influence in programs	1	0
Reasons for discouragement		
Lack of job opportunities	1	3
Too many problems associated with non-traditional enrollments	3	1
Difficulties in overcoming sex-stereotyping	2	3
Concerns that females cannot perform necessary tasks or compete with men	2	0
Working conditions	1	0
Concern that students would be recruited only to meet quotas	2	0

On the other hand, teachers and counselors can also be sources of overt or subtle disapproval of a student's program choice. Thus, several questions on the teachers' and counselors' survey forms investigated various roles in and perceptions of the recruitment of non-traditional students. The specific questions differed for occupational education and tenth grade counselors and teachers since these groups have varying degrees of responsibility for student recruitment. These differences are elaborated below.

TEACHER ROLE

Occupational education teachers were asked to respond to an open-ended question concerning the efforts each had made to increase enrollments of the underrepresented sex in his or her course. Of the 46 teachers in the sample, 59 percent described a personal effort they had made or thought no particular effort was necessary since they had no "underrepresentation" in their classes. The statement of the latter group of teachers was corroborated through enrollment data reported earlier: nine teachers (21% of those reporting enrollments) had 20 percent or more students of the underrepresented sex in their classes. The remaining teachers (41%) had made no efforts to increase enrollments.

The types of efforts employed by teachers give an insight into some current procedures for increasing cross-sex enrollment. These efforts can be classified in three groups. First, teachers personally encourage students on a one-to-one basis; for example, answers included "Personal interviews with prospective students" or "Encouraging current students to 'talk-up' the courses." Second, some teachers offer orientation programs. Their answers included, "Speaking and demonstrating at home schools and settlement houses," and "Encourage girls to take course when they enter through the many tours conducted by counselor." The latter comment was from a teacher of Electronics. Third, some teachers emphasize non-traditional job opportunities to students. An Architectural

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Drafting teacher reports, "I have personally encouraged females to enroll and am able to place females in a work situation if adequately prepared." An instructor of Sheet Metal Technology states that "During exploratory shop rotation, I make a point of telling my students the need that my industry has for women and their opportunities in the field."

Teachers who reported making a personal effort to increase non-traditional enrollments already have students of both sexes represented in their classes. Of the 22 teachers who teach single sex (traditional) classes, only 36 percent described an attempt to increase non-traditional enrollments. The remaining 21 teachers who reported class enrollments taught both male and female students; of these teachers, 81 percent reported personal efforts to attract non-traditional students or already had a minimum of 20 percent of the non-traditional sex enrolled. While based upon limited numbers, this suggests a positive association between a teacher's efforts to increase enrollment and the presence of non-traditional students in the instructor's classes. However, it is not known whether the special efforts led to cross-sex enrollment or whether teachers found teaching non-traditional students to be a favorable experience leading to further efforts to increase enrollments.

COUNSELOR ROLE

Since counselors are more likely than teachers to have a major responsibility for assisting students with career or program choices, several open-ended questions were employed to elicit their perceptions of the process of recruiting students for occupational education programs and their role in the process.

These questions required a free response by the counselor who described practices generally employed at his or her school. Since the length and detail of the written responses varied from counselor to counselor and many respondents reported multiple methods, the answers only provide an approximation of the frequency of a specified practice. Counselors in some schools may have employed some of the same activities but failed to mention them.

The first question asked the counselors how students are recruited for occupational education programs at their school. The question specifically asked who contacts students to tell them about such programs. In general, the occupational education counselors provided considerably more detail in their descriptions of the recruitment process, probably reflecting their interest and involvement in counseling students about occupational education. Among all respondents, however, the counselor is cited as the person most likely to contact students about programs. Approximately three in five counselors said that students were contacted either by the occupational education counselor or the home school counselor, or both. In addition, the occupational education teacher was mentioned as another frequent source of contact by over one-fourth of the counselors.

The respondents also named a variety of specific methods used by the participating schools to inform students about occupational education programs. The most frequently mentioned procedures were orientation programs or activities, visits to an occupational education center, and distribution of program materials to students. However, the technique (orientation programs) named by the greatest number of counselors (21) was only mentioned by one-third of the counselors surveyed. This is a minimal estimate of actual use of the technique. It may not fully reflect counselors' perceptions of the relative importance of the method for recruitment. Similarly, counselors did not indicate the extent of individual program planning and educational advising carried out with students. Counselors may have regarded this as part of the regular duties of a counselor in assisting students and not specifically related to recruitment for occupational education programs.

Another question asked counselors: "How are students of your school selected for [11th and 12th grade] occupational education programs? That is, if more students sign up for a course than can be enrolled, what criteria are used to choose students and who makes the choices?" This was not regarded as a problem or a real situation at many of the schools. "We have never experienced full enrollment, this is not a problem," was the response of over one-fourth of counselors. Other similar replies indicated that students would not be excluded from a program of their choice but that classes would be enlarged or added to meet the needs. Among those counselors who said criteria would be used to select students, the most frequent responses were academic performance and attendance, aptitude and interest tests, and priority given to upperclassmen. Few counselors responded to the second part of the question concerning who is responsible for the choice, probably because the choice is not necessary in the majority of schools. Those who replied said that counselor, teacher and Vocational Director would have this responsibility.

The third question in this series investigated the role of each individual in the recruitment and selection of students for 11th and 12th grade occupational education programs. Most of the counselors said that they assist students in three general ways: (1) through individual counseling; (2) by providing information about programs or career choice and (3) by organizing and arranging activities for students to acquire information. The actual written responses of the counselors provided a detailed view of the variety of tasks and activities that they performed. Only one counselor (tenth grade) reported that he had no personal role in recruiting and selecting students for occupational education. Other counselors reported multiple activities ranging from providing information to students to actually scheduling them for classes (see Table 49). One apparent difference between occupational education and tenth grade counselors was noted in the type of activity performed. Occupational education counselors were more likely to mention group methods of providing information and counseling, including talks at assemblies or in classes. Since the occupational education counselors are apt to be responsible for working with students in a large number of schools, this may be the best method of providing information to an extensive audience.

Table 49

Counselor's Self-reported Role in Student Recruitment and Selection

Activity	No. of counselors reporting the activity (N=60)
Provide/interpret career and course information	17
Personal and vocational counseling	14
Provide information to groups (assemblies, classes, etc.)	14
Distribute information in print and other media	9
Schedule students for classes	8
Arrange/conduct visits to occupational education facilities	6
Selection of students for programs	5
Liaison between school and parents	4
Work with potential employers	2
Arrange student contact with representatives of occupations	2
Other activities	8

Note: Number reporting each activity is based on counselor responses to an open- ended question. Total exceeds the number of counselors surveyed because of multiple responses.

Methods Currently Used to Increase Non-traditional Enrollments

Teachers and counselors were also asked what is currently done in their school district to increase the enrollment of girls in programs such as Construction and Maintenance Trades, Drafting, and Electronics, and the enrollment of boys in programs such as Cosmetology and Home Economics. Nine possible practices were listed, and respondents were asked to indicate all that applied in their school district. The practices presented for consideration were based on suggestions from the literature for increasing cross-sex enrollments in vocational education (especially Lewis & Kaltreider, 1976).

Teachers and counselors answered the same questions. If both groups had direct access to information on practices in their schools and school districts, teachers and counselors in a given school would be expected to give identical answers. However, Table 50 indicates very large differences between the two groups. Approximately twice as many counselors as teachers thought that the school already had each specified practice. Many teachers may not be aware of the actual practices and responsibilities of the counselor, suggesting a gap in communications within the educational institution.

From the teachers' perspective, the majority (56%) said that, in their schools, counselors have access to career materials and employment data demonstrating the importance of careers to female students. No other practice was mentioned by more than half the teachers. The least frequently mentioned practice, the presence of vocational teachers of the non-traditonal sex, was reported by only five percent of the teachers. This underscores the absence of role models for students considering non-traditional enrollments. A small proportion of teachers also said that non-traditional students were actively recruited in their schools (17%) or that teachers and counselors were encouraged to attend workshops on sexism in education (19%).

On the other hand, considerably larger proportions of counselors thought that three practices relating to equal access to programs and occupations were present in their schools. They believed that most counselors are familiar with Title IX legislation (87%), that all students receive program information (87%), and that counselors have information stressing the importance of careers to female students (85%). In particular, the practices reported by more than two-thirds of the counselors

Table 50

Methods Currently Used to Increase Non-traditional Enrollments

Practice	Current practice reported by Teachers (N=63)	Current practice reported by Counselors (N=60)	Counselors not now using this method but planning to in future (percentages)
Counselors are familiar with Title IX legislation	37%	87%	+ 1%
Information about area vocational schools and available programs reaches all prospective students	41	87	+ 1
Counselors have access to career materials and employment data that demonstrate the importance of careers to female students	56	85	+ 7
There is an attempt to familiarize parents with the broad spectrum of occupations which are available to all students	33	68	+ 9
There is a flexible program which facilitates exploration of a number of vocational options	30	70	+ 8
Counselors make available to students career materials which are not sex stereotyped (in the use of he and she, or pictures presenting members of only one sex performing a job)	32	67	+ 8
Teachers and counselors are encouraged to attend workshops which focus on sexism in education	19	53	+ 7
There is active, deliberate recruitment of the non-traditional sex in enrollment recruiting	17	28	+15
There are vocational teachers of the non-traditional sex	5	18	+ 5

were those over which the counselor would have some control. Their statements started with phrases such as "Counselors are familiar..., counselors have access..., counselors make available...". Other statements frequently checked dealt with giving information or providing opportunities for students to acquire knowledge. The majority of counselors saw themselves as already doing these things. One notable exception was that fewer than one-third of the counselors checked "There is active, deliberate recruitment of the non-traditional sex in enrollment recruiting." Perhaps the words "active, deliberate recruitment" seemed inappropriate to many counselors, who consider their role to be one of presenting information and options rather than to "recruit deliberately." Several counselors crossed out those words on the questionnaire.

Although the samples are small, several differences between the responses of tenth grade and occupational education counselors are of interest. Fewer tenth grade counselors (47%) than occupational education counselors (77%) reported that there was an attempt to familiarize parents with the broad spectrum of occupations which are available to students. Also, fewer tenth grade counselors (29%) than occupational education counselors (63%) reported that teachers and counselors are encouraged to attend workshops that focus on sexism in education. These differences may reflect actual differences in the responsibilities of the two counselor groups, particularly since differences in counselors' roles in student recruitment were noted on previous questions.

Of special interest was whether counselors from schools with high cross-sex enrollments reported the presence of these positive practices. However, on chi square tests of significance there were no significant differences between counselors in school with high and low cross-sex enrollments on any of the items.

The counselors surveyed were asked a further question, not required of the teachers. The counselors were asked what additional efforts were being planned in their school district to increase enrollment of students in courses non-traditional for their sex. Counselors were presented with the same list of nine options and asked to indicate any activity planned. As shown in Table 50, the activity checked most frequently was recruitment of the non-tradititional sex for courses (increase of 15% over present practice). The planned increase in most of the other activities was from five to nine percent except for the top-ranked practices, where little increase was projected. In these top-ranked activities, however, there is less room for growth.

EFFECTS OF IN-SERVICE TRAINING

It was reported earlier that some occupational education teachers and counselors (24% and 38%) had particpated in in-service training workshops and activities on sex-equity topics. The respondents who had received such training differed from the other survey participants on several items. First, occupational education teachers who attended these workshops were significantly more likely (chi square test, $p < .05$) to report that the following statements were true for their schools: (a) counselors have access to career materials that deomonstrate the importance of careers to female students; (b) information about area vocational schools reaches all prospective students; (c) There is active deliberate recruitment of the non-traditional sex; and (d) other practices to encourage non-traditional enrollments.

Second, occupational education counselors who attend these workshops are more likely to report that counselors make non-sex-stereotyped materials available to students.

It may be that these practices exist to a greater extent in schools where teachers and counselors are encouraged to attend workshops, or it may be that school personnel who attend workshops are more sensitive to and aware of practices that exist in all schools.

Practices That Discourage Non-traditional Enrollments

In addition to the positive practices present in the school districts surveyed, teachers and counselors were asked if they were aware of any practices (administrative, teaching, or counseling) that discourage boys or girls from taking certain courses. The respondents were presented with a list of nine possible practices and asked to indicate all applicable responses. Since both teachers and counselors responded to the same list of negative practices, the answers of the two groups can be compared. Table 51 shows that both groups infrequently report the existence of overt practices that discourage students. The negative practice mentioned most often, "lack of parental support for change," was named by only one-fourth of the professionals. Also, most of the practices ranking higher on the list were passive practices involving lack of support or encouragement, rather than active discrimination. In fact, eight respondents (7%) pointed out in writing that they were not aware of any negative practices.

Among the practices cited, tenth grade teachers and counselors were more aware of the absence of support by parents than were occupational education staff members. This factor was mentioned by 41 percent of tenth grade counselors and 47 percent of tenth grade teachers. It is likely that this lack of support is more evident in home schools where students are in the process of making program decisions; students who lack parental support thus do not reach the occupational schools.

A small number (12) of teachers and counselors added practices that in their opinions discouraged non-traditional enrollments. The most frequent comments centered around the negative effects of peer pressure on student decisions and the lack of priority given to the problems of sex-stereotyping in schools.

Table 51

Frequency of Current Practices that Discourage Enrollment in Non-traditional Programs

Practice	Reported by Teachers (N=63)	 Counselors (N=60)
Lack of parental support for change	27%	23%
Negative comments and/or jokes by school personnel about students based on gender.	11	17
Little or no active encouragement for students interested in courses in which there are few students of their sex	21	15
Negative comments about Title IX legislation and its impact	5	13
Lack of encouragement for males to take Home Economics courses	6	13
No administrative plan and/or encouragement for altering present practices	19	13
Use of predominately males or females in pictures in occupational education promotional literature	14	10
Lack of acceptance on the part of some faculty for the fact that females as well as males need career education courses	16	7
Other	11	8

Perceptions of Employment Opportunities

In order to determine if teachers and counselors differed in their perceptions of employment opportunities according to sex of the student, they were asked to rate job opportunities separately for boys and girls. Specifically, the counselors were requested to rate job opportunities in their local communities for a graduate of an occupational education program in each of the fields of: Automotive Services, Cosmetology, Construction Trades, Data Processing, Electronics, Machine and Metal Industries, Drafting, and Home Economics. Ratings were made on a five-point scale from "Excellent" to "Poor" with another option, "Don't know," included.

The occupational education teachers were asked to rate job opportunities for male and female students only for the field in which they teach. Tenth grade teachers did not have a comparable question on their survey forms.

Counselors differentiated among the eight fields in rating job opportunities as good or excellent for students in general (see Table 52). Over three-fourths (76%) of the counselors thought data processing holds better than average opportunities for students of either sex. No counselor said "poor" and only four respondents indicated that opportunities were "not good." The ratings of the other fields ranged widely with construction ranking lowest; fewer than half (46%) of the counselors believed this field to have excellent or good opportunities for either males or females. In addition, within the eight fields, counselors differed on whether the opportunities were equally good for both sexes. Agreement was best for data processing as 55% of the counselors indicated that job opportunities were good for both male and female students. Agreement was worst for construction with only eight percent of the counselors rating similarly for both sexes. Counselors who differentiated between the sexes generally favored the sex traditional for the occupation. For example, in machine and metal occupations (traditionally male), 30 percent of the counselors agreed that job opportunities were excellent or good for both sexes alike; of the 44 percent who did not rate opportunities the same for boys and girls, 42 percent thought they would be better for males. In home economics (traditionally female), only 18 percent of the counselors who thought job opportunities were excellent or good rated it the same for both sexes. The others (37%) believed opportunities to be better for girls. None of the counselors in this case thought opportunities would be better for boys. These counselor perceptions appear to confirm the existing sex-stereotyping in occupations. It should be emphasized that the answers to this question do not indicate the actual ease or difficulty a student might have in obtaining a job or the counselor's personal attitudes on occupational sex-stereotyping. Since the phrasing of the question asked counselors to assess opportunities in the local job market for male and female graduates, their answers may reflect such perceptions as sex bias of employers or depressed local labor market conditions. However, counselors' opinions suggest that in occupations where occupational sex-stereotyping has been strongest, members of the non-traditional sex were believed to face more difficulties in finding employment.

Forty-six occupational education teachers rated local job opportunities for male and female students who completed their courses. Since these teachers represented only four of the fields (Construction, Electronics, Drafting, and Cosmetology) discussed above and the sample of teachers for each field is small, it is difficult to compare or draw conclusions from these data. In general, the teachers' overall ratings of job opportunities were higher than counselor ratings for the four fields. Of fifteen teachers in construction, 14 said job opportunities were excellent or good; all eight Cosmetology teachers indicated excellent or good opportunities for both sexes. Drafting and Cosmetology teachers rated job opportunities equally available to both sexes. Construction and Electronics teachers varied in their answers; in construction trades, teachers thought boys' opportunities better than girls; in electronics, girls' job opportunities were rated slightly better than boys.

Table 52

Counselors' Ratings of Local Job Opportunities for Graduates of Occupational Education Programs

(N=60)

Field	Opportunities rated excellent or good for: Both Sexes	Males Only	Females Only	Neither Sex
Data Processing	55%	3%	18%	24%
Cosmetology	52	7	15	26
Machine and metal	30	42	2	26
Automotive services	35	33	3	28
Electronics	43	15	8	34
Drafting	43	7	17	34
Home economics	18	0	37	45
Construction	8	33	5	54

Recommendations for Increasing Non-traditional Enrollments

Teachers from both the occupational education courses and the tenth grade were asked what they thought might be done to increase the enrollment of girls in programs such as Construction and Maintenance, Drafting and Electronics, and boys in programs such as Cosmetology and Home Economics. These questions were open-ended and teachers could make as many or few suggestions as they wished. Table 53 summarizes the variety of approaches proposed by teachers for increasing non-traditional enrollments. The teachers' suggestions can be grouped under six major headings.

1. Recruitment
2. Counseling and information
3. Broadening perceptions of career options through contact with employers and employees

Table 53

Teachers' Recommendations for Increasing Non-traditional Enrollments (N=63)

Recommendations	Increase non-traditional enrollments of: Females N	Males N	Total
Increase awareness of non-traditional career opportunities	20	15	35
Improve guidance counseling and counselor awareness of sex-stereotyping	17	13	30
Active recruitment and support of non-traditional students	11	11	22
Use teachers and non-traditional students for recruitment efforts	8	10	18
Develop more exploratory or pre-vocational courses or activities	9	9	18
Offer orientation programs and visits to occupational education programs	8	7	15
Change sex-stereotyped attitudes through better information	7	7	14
Develop methods to combat peer pressure	2	9	11
Student contact with employers about job opportunities	6	4	10
Increase student awareness of existing non-traditional programs	6	3	9
Use various media to provide information about non-traditional careers	5	4	9
Promote parent awareness of career opportunities through programs, activities and materials	3	4	7
Assist students with job placements and training opportunities	3	3	6
Hire more teachers of the non-traditional sex	2	2	4
Provide administrative support for activities	2	2	4
Use outside speakers in student assemblies	2	2	4

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4. Assistance with job placement in non-traditional areas
5. Reducing sex-stereotyped attitudes
6. Familiarizing parents with non-traditional course and career options.

The suggestions are heavily weighted in favor of occupational education teachers since more of these teachers were included in the survey. However, a comparison of the types of responses made by both teacher groups indicates an overall similarity among suggestions.

Most of these recommendations focused on positive actions to increase non-traditional enrollments. A few instructors made negative comments. One said that to increase numbers of female students in his program area, class requirements or standards would have to be lowered. Another said it was inappropriate to have women in the occupation.

The teachers' recommendations were also similar for boys and girls, that is, in most cases their suggestions for increasing enrollments could be used to recruit students of either sex. The teachers' comments included the following:

"Offer an orientation program just for females [for a male field]."

"Letting them [females] know that they would be welcome and not treated coldly, letting them know that they could succeed."

"Vocational education teachers should do some recruiting in home schools."

"It should be pointed out at the home school that these careers are open to females and taught on a non-discriminatory level."

"Elementary education levels must be served instructional materials that will indicate the non-traditional areas that are in need of female workers. This is a social problem and must be worked on prior to 7th and 8th grade levels..."

"Invite girls [boys] to an on-the-job training course, taking them on field trips to various sites to watch the actual operations."

"Awareness--what do these people do...stress that employers are willing to hire on non-discriminating basis."

FINDINGS

1. Among the 46 occupational education teachers, all but one were teaching in fields traditional for their sexes.

2. The majority of respondents had not attended any sex-equity workshops. Previous attendance was reported by less than two-fifths of the counselors and one-fifth of the teachers. However, among those occupational education teachers who had attended sex-equity workshops, more of them than other teachers reported certain positive practices in their schools for increasing non-traditional enrollments.

3. Approximately 90% of counselors and teachers thought both girls and boys should be encouraged to take courses non-traditional for their sex; additionally, all teachers thought boys should be encouraged to be in non-traditional courses.

4. There was a positive association between a teacher's personal efforts to increase non-traditional enrollment and the presence of non-traditional students in the instructor's classes.

5. Approximately twice as many counselors as teachers were aware of counseling practices that attempt to increase enrollment of students in programs non-traditional for their sex.

6. Teachers and counselors reported few or no negative practices. Only "Lack of Parental Support" was mentioned by two-fifths of the tenth grade teachers and counselors, indicating that students who lack parental support may not reach the occupational schools.

7. Teachers made recommendations for increasing non-traditional enrollments. These were grouped as: recruitment, counseling and information, broadening perceptions of career options through contact with employers and employees, assistance with job-placement in non-traditional areas, reducing sex-stereotyped attitudes, and familiarizing parents with non-traditional course and career options.

CHAPTER VII

RECOMMENDATIONS

This chapter presents recommendations for overcoming sex-role stereotyping in occupational education. These recommendations follow from the findings of the previous chapters. There are four very broad areas from which more focused or applied recommendations have been drawn. We have first identified these general areas and then have grouped more specific recommendations within these broad categories.

1. Increase information and counseling for students and parents about non-traditional occupations.

The survey data from tenth grade students indicated that students who actually planned to take occupational education courses were generally supported by parents in this decision. However, when tenth grade and occupational education students were asked about their perceptions of support for potential enrollment in eight program areas, students perceived more parental opposition toward a decision to enroll in a non-traditional program. The parents of these students also showed less support for non-traditional enrollments, with students estimating their own parents' opinions quite accurately. In addition, many students indicated that they did not know what attitudes others (especially their counselors) would hold about enrollment in non-traditional programs. Hence, there is evidence that both students and parents need more information about non-traditional occupational areas and need to interact on attitudes and issues of sex-stereotyping. In addition, none of the non-traditional students were enrolled in their parent's occupational area.

Some specific approaches or activities might include:

(a) Provide increased opportunities for both students and parents to obtain information about non-traditional careers. This might be addressed as part of efforts to inform and recruit students by vocational school counselors in which information and counseling concerning career options and programs or directed at both students and parents.

(b) Counselors in home schools should be well-informed about career options and employment data, especially in regard to non-traditional career areas. These counselors are the first contact for many students considering enrollment in an occupational program.

(c) Home school counselors should be encouraged to begin information and counseling efforts with students and their parents considerably before the time when students are asked to make program decisions. Elementary and junior high teachers and counselors can provide early exposure to a wide range of vocational opportunities, including non-traditional careers. High school counselors can build upon these early efforts and facilitate interaction between students and parents about career decision-making in individual or group meetings.

2. Develop a support system for students who are making career decisions and for students enrolled in non-traditional programs.

More tenth grade girls (55%) than boys (33%) had considered enrolling in an area non-traditional for their sex. Few students, however, actually planned to take such a course. Among tenth grade boys and girls who considered a non-traditional area, approximately half (51%) felt that no one had given them particular encouragement. However, boys (76%) and girls (63%) also thought that no one had actively discouraged them.

Among sources of encouragement, tenth grade girls named female friends most frequently (31%), followed by mothers (25%) and fathers (21%). Boys named mothers (30%), fathers (21%) and male friends (16%). For both sexes, school personnel ranked low as actual support sources. A small minority of boys in occupational education programs disliked the prospect of equal enrollments of boys and girls.

Some specific approaches or activities might include:

(a) Home school counselors and teachers should identify students who are considering non-traditional courses and meet with them to encourage their interest.

(b) Promote non-traditional students as a support system for one another by placing two or more students of the non-traditional sex together in classes whenever possible, or organizing a group of non-traditional students across programs to facilitate interaction.

(c) Utilize non-traditional students in recruitment of prospective students to serve as role models and answer questions and concerns of students considering a non-traditional program.

(d) Build on the support that girls perceive from other girls for non-traditional course choices.

(e) Teachers and counselors should work to change the attitudes of the minority of boys who oppose non-traditional enrollments.

(f) See 1-a above. School need to work more closely with parents to provide support for student decisions.

3. Increase the involvement of teachers and counselors in enlarging student career options and providing information about occupational education.

Job opportunites were an important factor in student decisions, although they were often based on erroneous information. Girls had less regular job experience than boys and less familiarity with occupational areas that are non-traditional for females.

Nearly all teachers believe that equal opportunities should be available to all students and provide suggestions for increasing non-traditional enrollments. The suggestions of tenth grade teachers were broad or general in focus; those of occupational education teachers were more specific. Further, occupational education teachers who reported making a personal effort to increase enrollments of non-traditional students were significantly more likely to have non-traditional students in their classes.

Some specific approaches or activities might include:

(a) Assist girls to obtain regular part-time jobs in non-traditional occupational areas.

(b) Involve teachers in the process of recruiting students into occupational education and providing accurate information about job opportunities. Depending upon individual school needs and resources, teachers might be directly involved, for example in meeting prospective students, speaking before groups, talking with parents; or indirectly involved for example in identifying former non-traditional students to act as speakers and role-models or in selecting useful career information materials.

(c) Since there is a need for continuing support of students and for communication with parents once the student is enrolled in a non-traditional course, teachers and counselors can assist these students by providing encouragement and demonstrating willingness to help students overcome any probelms or difficulties encountered in non-traditional programs.

4. Provide in-service education for teachers and counselors to assist them in working with non-traditional students, both in recruitment activities and in the classroom.

The teachers and counselors surveyed were generally positive toward working with non-traditional students and believed that the numbers of such students should be increased. They suggested a wide variety of approaches that might be used to help recruit students. In-service activities involving teachers and counselors can provide a forum for the exchange of ideas and strategies for reducing sex stereotyping as well as addressing other related topics such as sex bias in curriculum materials, use of outside resources (e.g., prospective employers, community groups, etc.) in providing information about occupations, or special problems faced by non-traditional students.

In addition to recruitment, teachers play an important role in developing a classroom atmosphere conducive to equitable treatment of all students. In-service training might be useful in helping teachers develop awareness of their own behavior.

Along with these general recommendations based on our study, we have included a chart (Table 54) comparing recommendations from this and other research projects. In the chart, omission of a recommendation means that this area was not specifically mentioned in a report, rather than rejection of such a recommendation. The chart gives an indication of the frequency with which each approach to reducing sex-role stereotyping has been suggested. Many of the recommendations of others are quite similar to those we made on the basis of the occupational education and tenth grade teachers responses for increasing non-traditional enrollments. In comparison to others, the recommendations of this study can be seen to cover all the areas focused on previously except the last one of legal remedies. The main contributions of this study are, however, in the area of attitude change through dissemination to parents and students of information on a variety of topics including gender roles and career and job options.

3

Table 54

Recommendations from Research on Sex-role Stereotyping

Recommendation	Ott, et al. (1980)*	Richards & Brooks (1979)	Farris (1978)	Schonhorn & O'Neil (1978)	Mitchell (1977)	Lewis & Kaltreider (1976)	Kane et al. (1976)	Roby (1976)	Verheyden-Hilliard (1976)
Focus: Materials									
1. Increase awareness of sex bias in materials to be used in counseling.	X			X		X			
2. Development and/or use of non-sexist materials in counseling, classroom, library, etc.	X	X	X	X				X	X
3. Increase awareness/use of up-to-date informative materials on careers and occupations.	X			X		X		X	
Focus: Attitude change/Information dissemination									
1. Increase counselor/student/teacher/parent awareness of own sex bias.	X		X	X		X			
2. Increase awareness of sex-role stereotyping in general through in-service training, library materials, or other means for teachers, counselors, students, and/or the community.	X	X	X	X	X	X	X	X	
3. Increase awareness of non-traditional careers/job opportunities through in-service training, PTA, career fairs, school newspapers, assemblies, outside resources (e.g., visits to local industries), tours by students to see all programs, improved counseling.	X	X	X	X	X	X	X	X	X

Recommendation	Ott, et al. (1980)	Richards & Brooks (1979)	Farris (1978)	Schonhorn & O'Neil (1978)	Mitchell (1977)	Lewis & Kaltreider (1976)	Kane et al. (1976)	Roby (1976)	Verheyden-Hilliard (1976)
4. Provide for early awareness of vocational opportunities through mandatory and introductory classes, field trips, expanded career education.	X	X		X		X	X	X	
5. Combat peer pressure/provide life skills course for both sexes.	X					X			
6. Increase student exposure to work/job seeking--assist with job procurement.	X							X	
Focus: Changes in use of human resources									
1. Employ more female counselors.					X				
2. Include more women on advisory boards and councils.								X	
3. Hire more vocational teachers of the non-traditional sex.	X			X	X	X		X	
4. Utilize non-traditional students as role models (e.g., speakers/recruiters).	X					X		X	
5. Organize non-traditional students as a support system for each other.				X		X	X	X	
6. Actively recruit non-traditional students.	X	X							
Focus: Other									
1. Pass legislation to provide support for exemplary programs.					X				
2. Provide for adequate enforcement of existing laws (e.g., Title IX).								X	

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*Recommendations of occupational education and tenth grade teachers in present study.

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APPENDIX

TABLES
and
SURVEY INSTRUMENTS

Table 55

Occupational Distribution of Parents of Tenth Grade Students

(percentages)

Occupational Category	Fathers (N=306)	Mothers (N=301)
Professional, technical and managerial	25.2%	20.6%
Clerical and sales	10.8	28.6
Service	9.2	15.9
Agricultural, fishing, forestry and related	5.6	.1
Processing, machine trades and benchwork	15.7	1.7
Structural work	16.3	0.0
Miscellaneous and other	11.8	7.6
Housewife	0.0	21.6
Deceased, disabled, unemployed, and retired	5.6	3.0

Table 56

Percent of Students Who Anticipate Support for Enrollment in Various Occupational Education Programs from Different Sources by Sex

Program	Guidance Counselors	Male Friends	Fathers	Mothers	Female Friends
Boys					
Automotive services	72.8%	75.0%	72.0%	66.6%	67.0%
Construction trades	73.0	72.2	73.8	70.4	65.7
Machine & metal industries	73.4	73.8	71.8	69.1	64.5
Electronics	77.7	73.7	83.1	80.0	68.5
Drafting	69.9	59.7	70.3	69.5	61.8
Data processing	62.6	46.7	53.3	59.2	52.9
Cosmetology	28.4	6.7	11.0	20.2	24.9
Home economics	36.7	10.2	15.5	27.5	31.2
Girls					
Automotive services	29.5%	34.7%	38.9%	26.8%	35.4%
Construction trades	27.5	22.9	27.8	23.2	28.0
Machine & metal industries	28.1	24.7	28.2	28.2	29.0
Electronics	35.9	29.2	39.4	36.8	37.6
Drafting	47.4	31.9	41.3	44.4	40.9
Data processing	67.5	57.0	65.1	70.2	66.8
Cosmetology	75.5	74.8	73.7	87.8	87.2
Home economics	75.7	68.6	71.1	82.0	75.0

Table 57

Percentage of Girls Perceiving Help in Choosing Occupational Course by Source of Help and Type of Program

(percentages)

Source of Influence	Girls in Traditional Programs (N=194)	Girls in Non-traditional Programs (N=40)
No one	40.7%*	35.8%
Mother or stepmother	46.5	29.4
Father or stepfather	22.3	16.3
Female friend or sister	48.1	22.3
Male friend or brother	12.4	22.3
Counselor	24.3	16.0
Teacher	---**	12.3
Other person	10.3	9.6

* Weighted percentages, see text.
** Percentages below 5 are not reported.

Table 58

Greatest Influence on Girls' Choice of Occupational Education Course by Type of Program

(percentages)

Source of influence	Girls in Traditional Programs (N=157)	Girls in Non-traditional Programs (N=45)
No one or myself	24.8%*	29.2%
Mother or stepmother	33.2	16.6
Father or stepfather	---**	8.3
Female friends or sister	17.9	8.3
Male friends or brother	---	16.7
Counselor	10.6	---
Teacher	---	12.5
Other	6.2	---

* Weighted percentages, see text.
** Percentages below 5 are not reported.

Table 59

Non-traditional Courses Considered by Girls in the Traditional Program

Course	Number Who Considered Course Urban Schools	 Suburban, Small Town and Rural Schools
Automotive services or auto mechanics	19	35
Building construction or building trades	1	4
Masonry	1	0
Carpentry	0	4
Conservation	0	1
Drafting	2	2
Drafting technology	0	1
Electronics	4	5
Electricity	1	1
Machine and metal industries	4	3
Other trade and industrial	1	3

Table 60

Sources of Encouragement for Girls Considering Enrolling in a Non-traditional Course by Type of Program

Source	Girls in Traditional Programs (N=82)	Girls in Non-traditional Programs (N=29)
No one	59.5%*	52.2%
Mother or stepmother	14.1	24.4
Father or stepfather	16.8	17.4
Female friends or sister	24.3	30.0
Male friends or brother	26.3	34.3
Any counselor	5.6	13.6
Any teacher	---**	10.4

* Weighted percentages, see text.
** Percentages below 5 are not reported.

Table 61

Sources of Discouragement for Girls Considering Enrolling in a Non-traditional Course by Type of Program

Source	Girls in Traditional Programs (N=79)	Girls in Non-traditional Programs (N=29)
No one	69.7%*	76.5%
Mother or stepmother	13.6	9.8
Father or stepfather	12.7	6.5
Female friends or sister	14.7	9.8
Male friends or brother	17.6	10.1
Counselor	6.8	6.9
Teacher	---**	---

* Weighted percentages, see text.
** Percentages below 5 are not reported.

Table 62

Traditional Students' Feelings about Equal Enrollments of Students of Opposite Sex, by Sex and School Enrollment Type

	Girls							
	Low Cross-Sex Enrollment		High Cross-Sex Enrollment		Low Cross-Sex Enrollment		High Cross-Sex Enrollment	
Responses	%	N	%	N	%	N	%	N
Would like it	28.3	15	16.5	13	39.2	20	22.5	18
Doesn't matter	62.3	33	74.7	59	54.9	28	66.2	53
Would not like it	3.8	2	1.3	1	5.9	3	8.8	7
Don't know, other	5.7	3	7.6	6	0.0	0	2.5	2
Total	100.1	53	100.1	79	100.0	51	100.0	80

Table 63

Sources of Discouragement of Girls in Cosmetology for Taking Non-traditional Courses by School Enrollment Type

	Low Cross-Sex Enrollment		High Cross-Sex Enrollment	
	(N=27)		(N=23)	
Source	Percentage	N	Percentage	N
No one	55.6	15	78.3	18
Mother or stepmother	25.9	7	4.3	1
Father or stepfather	29.6	8	4.3	1
Female friends or sister	18.5	5	13.0	3
Male friends or brother	22.2	6	17.3	4
Any counselor	11.1	3	4.3	1
Any teacher	3.7	1	0.0	0

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10th Grade Student Survey

Dear Student:

Your class has been chosen to take part in an important survey. Please answer the questions and then return the survey to your teacher.

We have also prepared surveys for your parents to answer. Please take their surveys—one for each parent—home with you after school today. Ask each of your parents to complete one of the surveys. If you don't live with your parents, please ask the adults you live with to answer the survey. Return their surveys to your teacher within two days.

Thank you very much for helping us.

Sincerely,
Mary D. Ott
Mary D. Ott

Section 1

1. **Check one: Male _______ Female _______**

2. **I am a (an) ___________.** Circle one number. (You may omit this question if you want to.)
   1. American Indian, Native American
   2. Asian or Asian-American
   3. Black, or Afro-American (Non-Hispanic)
   4. Hispanic, Spanish surname
   5. White, Caucasian (Non-Hispanic)
   6. Other

3. **In what grades did you take home economics?** Circle as many as are true for you.
   Grades 7 8 9 10

4. **Do you plan to take home economics in 11th or 12th grade?** Circle one number.
   1. Yes
   2. No
   3. I don't know

5. **Are you taking an occupational education course this year? Occupational education courses include drafting, electronics, construction, cosmetology, data processing, secretarial studies, and many other courses.**
   1. Yes
   2. No

6. **If you are taking an occupational education course, what course is it?**

   ____

7. **Do you plan to take any occupational education courses in 11th or 12th grade?** Circle one number.
   1. Yes
   2. No
   3. I don't know

Answer the questions in Section 2 if you plan to take an occupational education course in 11th or 12th grade. If you don't plan to take an occupational education course, go on to Section 3.

Section 2

8. **What occupational education course or courses do you plan to take?**

   ____

9. **At what school will you take the course?** ______________________

10. **Why did you select that course or those courses?** You may circle more than one reason. Circle the numbers of *all* the reasons that were true for you.
    1. The course was recommended by people who had taken it.
    2. A counselor convinced me to take it.
    3. I know people who work in the field.
    4. There was no other interesting course open.
    5. I want to try out this field.
    6. I need the credits.
    7. The course sounds interesting.
    8. I want a course that meets at the time of day that this one is scheduled.
    9. I am good at this kind of work.
    10. I want to leave my home school.
    11. I want to learn a skill and prepare for a job.
    12. My parents convinced me to take it.
    13. I think I will like the work.
    14. It's a good trade with a good income.
    15. My friends are going to take the course.
    16. There are jobs available in this field.
    17. I want to work in my parents' business, which is in this field.
    18. I don't know.
    19. Other (please explain) ______________________________

11. **Which of the following people helped you decide on your choice of an occupational education course?** Circle the numbers of *all* those who helped you decide.
    1. No one
    2. Home school counselor
    3. Home school teacher
    4. BOCES counselor
    5. BOCES or occupational education teacher
    6. Male friends
    7. Female friends
    8. Father
    9. Stepfather
    10. Mother
    11. Stepmother
    12. Brother
    13. Sister
    14. Other person (please explain) ______________________________

    ____

12. **Which of the persons listed in Question 11 was the greatest influence in your decision about an occupational education course?** Give the number of the person from Question 11 who was the most influential person. ________

Questions 13 through 17 concern your choice of the occupational education course you plan to take. For each question,

Put "1" if the person *supports* your choice.
Put "2" if the person *neither supports nor opposes* your choice.
Put "3" if the person *opposes* your choice.
Put "4" if you *don't know* how the person feels.

13. **How does your mother or female guardian feel about your occupational education course?** ________
14. **How does your father or male guardian feel about your occupational education course?** ________
15. **How does your home school guidance counselor feel about your occupational education course?** ________
16. **How do your closest male friends feel about your occupational education course?** ________
17. **How do your closest female friends feel about your occupational education course?** ________

18. When you have completed your occupational education courses, how good do you think your job opportunities will be in this field in your local area? Circle *one* number.

1. Excellent
2. Good
3. Average
4. Not good
5. Poor
6. I don't know.

Please continue with Section 3

Section 3

19. Check the reaction you would have got from your father or male guardian if you enrolled in the following programs for next year.

PROGRAM	**He would have supported it**	**He would have neither supported nor opposed it**	**He would have opposed it**	**I don't know**
SAMPLE: Printing Trades		✓		
Automotive Services				
Cosmetology				
Construction Trades				
Data Processing				
Electronics				
Machine & Metal Industries				
Drafting				
Home Economics				

20. Check the reaction you would have got from your mother or female guardian if you enrolled in the following programs for next year.

PROGRAM	**She would have supported it**	**She would have neither supported nor opposed it**	**She would have opposed it**	**I don't know**
SAMPLE: Printing Trades		✓		
Automotive Services				
Cosmetology				
Construction Trades				
Data Processing				
Electronics				
Machine & Metal Industries				
Drafting				
Home Economics				

21. Check the reaction you would have got from your home school guidance counselor if you enrolled in the following programs for next year.

PROGRAM	He/She would have supported it	He/She would have neither supported nor opposed it	He/She would have opposed it	I don't know
SAMPLE: Printing Trades		✓		
Automotive Services				
Cosmetology				
Construction Trades				
Data Processing				
Electronics				
Machine & Metal Industries				
Drafting				
Home Economics				

22. Check the reaction you would have got from your male friends if you enrolled in the following programs for next year.

PROGRAM	They would have supported it	They would have neither supported nor opposed it	They would have opposed it	I don't know
SAMPLE: Printing Trades		✓		
Automotive Services				
Cosmetology				
Construction Trades				
Data Processing				
Electronics				
Machine & Metal Industries				
Drafting				
Home Economics				

23. Check the reaction you would have got from your female friends if you enrolled in the following programs for next year.

PROGRAM	They would have supported it	They would have neither supported nor opposed it	They would have opposed it	I don't know
SAMPLE: Printing Trades		✓		
Automotive Services				
Cosmetology				
Construction Trades				
Data Processing				
Electronics				
Machine & Metal Industries				
Drafting				
Home Economics				

Section 4

24. Did you ever think about taking a course where there were few students or no students of your sex? (For girls, these are courses in fields such as automotive services, machine and metal industries, construction trades, electronics, and drafting. For boys, these are courses in fields such as cosmetology, secretarial work, and home economics.) Circle the number.

1. Yes
2. No

25. If you considered taking a course in which there were few students or no students of your sex, what course is it?

____

25a. If you considered taking a course in which there were few students or no students of your sex, did anyone encourage you to take that course? Circle the numbers of *all* those who encouraged you to take it.

1. No one
2. Home school counselor
3. Home school teacher
4. BOCES counselor
5. BOCES or occupational teacher
6. Male friends
7. Female friends
8. Father
9. Stepfather
10. Mother
11. Stepmother
12. Brother
13. Sister
14. Other person (please explain) ______________________________

____

25b. If you considered taking a course in which there were few students or no students of your sex, did anyone discourage you from taking that course? Circle the numbers of *all* those who discouraged you from taking it.

1. No one
2. Home school counselor
3. Home school teacher
4. BOCES counselor
5. BOCES or occupational teacher
6. Male friends
7. Female friends
8. Father
9. Stepfather
10. Mother
11. Stepmother
12. Brother
13. Sister
14. Other person (please explain) ______________________________

____

26. Would you be uneasy about enrolling in an occupational education or home economics course in which few or none of the students in the course were members of your sex? Circle one number.

1. Yes
2. No

27. If you would be uneasy about enrolling in an occupational education course because few or none of the students in the course were members of your sex, which of the following factors would be important in helping convince you to take the course? Please circle the numbers of *all* the responses that apply to you.

1. Being able to try out the course for 6 weeks before signing up for it
2. Having a 1-year rather than a 2-year or longer program in the field
3. Having the course offered at the school you now attend, rather than at BOCES or a vocational/technical high school
4. Having at least one other student of your sex in the course
5. Having at least 20% of the students in the course members of your sex. (That would be 6 out of 30 students, for example.)
6. Having female friends in the course
7. Having male friends in the course
8. Knowing you would have more job opportunities if you took the course
9. Knowing you would earn good money if you took the course
10. Knowing your parents thought it was a good course for you
11. Knowing your female friends thought it was a good course for you
12. Knowing your male friends thought it was a good course for you
13. Knowing your guidance counselor thought it was a good course for you
14. Knowing students in the course would be friendly to you
15. Knowing you would get fair treatment from the teacher
16. Knowing you would learn useful skills for something other than a job
17. None of these factors would be important in helping convince me to take the course.
18. Other factors (please specify) ______________________________

____

Section 5

28. **Do you currently have a job outside school? Which of the following statements best describes your current work responsibilities?** Circle *one* number.
    1. A regular full-time job for pay
    2. A regular part-time job for pay
    3. Occasional jobs for pay
    4. Volunteer work
    5. Chores at home
    6. No current work responsibilities
    7. Other (please explain) ______

29. **What do you plan to do during the year after you graduate from high school?** Circle the numbers of *up to three* choices.
    1. Work full-time
    2. Work part-time
    3. Join the armed services
    4. Enter a training or apprentice program
    5. Go to a technical school
    6. Go to a two-year college
    7. Go to a four-year college
    8. Get married
    9. I don't know.
    10. Other (please explain) ______

30. **What would you like to be doing five years after you graduate from high school?** Circle the numbers of *up to three* choices.
    1. Working full-time
    2. Working part-time
    3. In the armed services
    4. In a training or apprentice program
    5. In a technical school
    6. In a two-year college program, or a graduate of a two-year college
    7. In a four-year college program, or a graduate of a four-year college
    8. Married
    9. I don't know.
    10. Other (please explain) ______

31. **With whom do you live?** Circle *one* number.
    1. Mother and father
    2. Mother and stepfather
    3. Stepmother and father
    4. Mother only
    5. Father only
    6. Other (please explain) ______

32. **What type of employment does your father (or male guardian) usually have? (For example, salesperson, teacher, cook, bank teller, etc.)**

    ______

33. **What type of employment does your mother (or female guardian) usually have? (For example, salesperson, teacher, cook, bank teller, etc.)**

    ______

Thank you very much for completing this survey.

The New York State College of Agriculture and Life Sciences, a Statutory College of the State
University at Cornell University, Ithaca, NY 14853.

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NEW YORK STATE COLLEGE OF AGRICULTURE AND LIFE SCIENCES

Cornell Institute for Occupational Education
Department of Education
Stone Hall
Ithaca, N.Y. 14853
Telephone 607-256-6515

10th Grade

Parent Survey

The Cornell Institute for Occupational Education and the Office of Special Programs in Occupational Education of the New York State Education Department are conducting a study of student choice of courses in occupational education and home economics. Occupational education courses include: automotive services, cosmetology, construction trades, data processing, electronics, machine and metal industries, secretarial, and agricultural courses, and many others. As a parent or guardian, your response to this survey will be essential to our study. The responsibility for these questions rests with the Cornell Institute for Occupational Education and the questions do not necessarily reflect local school policies or staff opinions. We appreciate your viewpoints and thank you for your cooperation in filling out this brief form.

1. **Please indicate your relationship to the student who gave you the survey.** Circle one number.
    1. Father
    2. Stepfather
    3. Mother
    4. Stepmother
    5. Other (please specify) ______________________________
2. **What is the sex of the student who gave you this survey?** Circle one number.
    1. Male
    2. Female
3. **Is this child planning to take home economics next year?** Circle one number.
    1. Yes
    2. No
    3. I don't know
4. **How do you feel about your child's decision whether or not to take home economics next year?** Circle one number.
    1. I support the decision.
    2. I neither support nor oppose the decision.
    3. I oppose the decision.
5. **Is your child planning to take an occupational education course next year?** Circle one number.
    1. Yes
    2. No
    3. I don't know.
6. **If your child is planning to take an occupational education course next year, what course is it?** ______________________________

    ____
7. **If your child is planning to take an occupational education course next year, how do you feel about the course your child chose?** Circle one number.
    1. I support the choice.
    2. I neither support nor oppose the choice.
    3. I oppose the choice.
8. **If your child is planning to take an occupational education course, how good will his/her job opportunities be in this field in your local area when he/she has completed the course?**
    1. Excellent
    2. Good
    3. Average
    4. Not good
    5. Poor
    6. I don't know.

9. **How would you react if your child decided to enroll in the following programs?** Check your reaction to each.

PROGRAM	**Would support it**	**Would neither support nor oppose it**	**Would oppose it**	**I don't know**
SAMPLE: Printing Trades		✓		
Automotive Services				
Cosmetology				
Construction Trades				
Data Processing				
Electronics				
Machine & Metal Industries				
Drafting				
Home Economics				

10. **What would you like your child to do during the year after he/she graduates from high school?** Circle the numbers of *up to three* choices.
    1. Work full-time
    2. Work part-time
    3. Join the armed services
    4. Enter a training or apprentice program
    5. Go to a technical school
    6. Go to a two-year college
    7. Go to a four-year college
    8. Get married
    9. I don't know.
    10. Other (please explain) ____________________

11. **What would you like your child to be doing five years after graduation from high school?** Circle the numbers of *up to three* choices.
    1. Working full-time
    2. Working part-time
    3. In the armed services
    4. In a training or apprentice program
    5. In a technical school, or a graduate of a technical school
    6. In a two-year college, or a graduate of a two-year college
    7. In a four-year college, or a graduate of a four-year college
    8. Married
    9. I don't know
    10. Other (please explain) ____________________

Thank you very much for completing this survey. Please give your completed survey to your child to return to his or her teacher.

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10th Grade Teacher Survey

Your name (optional) ____

1. **What is your sex?** Circle one number.
   1. Male
   2. Female

2. **For your class that is completing student surveys, please indicate the course name, the number of male students, and the number of female students.**

   Course name ____

   Number of male students ________

   Number of female students ________

3. **What might be done to increase the enrollment of girls in programs in which they are underrepresented, such as construction and maintenance, drafting, and electronics?**

   ____

   ____

   ____

   ____

   ____

   ____

   ____

   ____

4. **What might be done to increase the enrollment of boys in programs in which they are underrepresented, such as personal services (cosmetology, barbering) and in secondary level home economics?**

   ____

   ____

   ____

   ____

   ____

   ____

   ____

   ____

5. **Do you think girls should be encouraged to take courses in construction and maintenance, drafting, and electronics?** Circle one number.
   1. Yes
   2. No
   3. I don't know.

6. **Do you think boys should be encouraged to take courses in personal services and in home economics?** Circle one number.
   1. Yes
   2. No
   3. I don't know

7. **What is being done in your school district to increase the enrollment of girls in programs such as construction and maintenance trades, drafting, and electronics and of boys in programs such as personal services (cosmetology, barbering) and home economics?** Circle the numbers of all those which apply.
   1. Counselors have access to career materials and employment data that demonstrate the importance of careers to female students.
   2. Counselors make available to students career materials that are not sex-stereotyped (in use of *he* and *she* or in pictures presenting members of only one sex performing a job).
   3. Counselors are familiar with Title IX legislation.
   4. Teachers and counselors are encouraged to attend workshops that focus on sexism in education.
   5. Information about area vocational schools and available programs reach *all* prospective students.
   6. There are vocational teachers of the nontraditional sex.
   7. There is a flexible program which facilitates exploration of a number of vocational options.
   8. There is active, deliberate, recruitment of the nontraditional sex in enrollment recruiting.
   9. There is an attempt to familiarize parents with the broad spectrum of occupations which are available to all students.
   10. Other ______________________________

8. **Are you aware of practices (administrative, teaching, or counseling) in your school district that discourage boys or girls from taking certain courses because of the sex of the student?** Circle the numbers of all those that apply.
   1. Negative comments and/or jokes by school personnel about students based on gender
   2. Use of predominantly male or female pronouns in literature about occupational education courses
   3. Use of predominantly males or females in pictures in occupational education promotional literature
   4. Lack of acceptance on the part of some faculty of the fact that females as well as males need career education courses
   5. Lack of encouragement for males to take home economics courses
   6. Negative comments about Title IX legislation and its impact
   7. Little or no active encouragement for students interested in courses in which there are few students of their sex
   8. No administrative plan and/or encouragement for altering present practices
   9. Lack of parental support for change
   10. Others ______________________________

9. **Have you participated in any sex-equity faculty development programs or workshops?** Circle one number.
   1. Yes
   2. No

   If "Yes," please identify the programs or workshops.

Thank you very much for completing this survey.

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10th Grade
Counselor Survey

Your name (optional) ______________________________

1. **What is your sex?** Circle one number.
   1. Male
   2. Female
2. **Please indicate the approximate numbers of male students and of female students whom you counsel.**

   Number of male students _______

   Number of female students _______
3. **How are students at your school recruited for 11th and 12th grade occupational education programs? That is, who contacts students at your school to tell them about programs?** ______________________________

   ____

   ____

   ____
4. **How are students at your school selected for 11th and 12th grade occupational education programs? That is, if more students sign up for a course than can be enrolled, what criteria are used to choose students, and who makes the choices?** ______________________________

   ____

   ____

   ____
5. **What is your role, if any, in the recruitment and selection of students for 11th and 12th grade occupational education programs?** ______________________________

   ____

   ____

   ____
6. **What is being done in your school district to increase the enrollment of girls in the programs such as construction and maintenance trades, drafting, and electronics and of boys in programs such as personal services (cosmetology, barbering) and in home economics?** Circle the numbers of all which apply.
   1. Counselors have access to career materials and employment data that demonstrate the importance of careers to female students.
   2. Counselors make available to students career materials which are not sex-stereotyped (in use of *he* and *she* or in pictures presenting members of only one sex performing a job).
   3. Counselors are familiar with Title IX legislation.
   4. Teachers and counselors are encouraged to attend workshops which focus on sexism in education.
   5. Information about area vocational schools and available programs reach *all* prospective students.
   6. There are vocational teachers of the nontraditional sex.
   7. There is a flexible program which facilitates exploration of a number of vocational options.
   8. There is active, deliberate, recruitment of the nontraditional sex in enrollment recruiting.
   9. There is an attempt to familiarize parents with the broad spectrum of occupations which are available to all students.
   10. Other ______________________________

   ____

7. **What additional efforts are being planned in your school district to increase the enrollment of girls in programs such as construction and maintenance trades, drafting and electronics and of boys in programs such as personal services and home economics?** Circle the numbers of all which apply.
   1. Counselors will have access to career materials and employment data that demonstrate the importance of careers to female students.
   2. Counselors will make available to students career materials which are not sex-stereotyped (in use of *he* and *she* or pictures presenting members of only one sex performing a job).
   3. Counselors will become familiar with Title IX legislation.
   4. Teachers and counselors will be encouraged to attend workshops which focus on sexism in education.
   5. Information about area vocational schools and available programs will reach *all* prospective students.
   6. There will be vocational teachers of the nontraditional sex.
   7. There will be a flexible program which facilitates exploration of a number of vocational options.
   8. There will be active, deliberate, recruitment of the nontraditional sex in enrollment recruiting.
   9. There will be an attempt to familiarize parents with the broad spectrum of occupations which are available to all students.
   10. Other ______________________________

   ____

8. **Do you think it is a good idea to encourage girls to take courses in construction and maintenance trades, drafting, and electronics, and other fields in which girls are less than 20% of the enrollment?**

   Yes _____ No _____

   Why or why not? ______________________________

   ____

   ____

9. **Do you think it is a good idea to encourage boys to take courses in personal services and in home economics, and in other fields in which boys are less than 20% of the enrollment?**

   Yes _____ No _____

   Why or why not? ______________________________

   ____

   ____

10. **Please fill in the following charts to indicate your estimate of job opportunities in your local area for students who complete occupational education courses.** Check one response for each field in each chart. The first chart is for job opportunities for boys; the second chart is for job opportunities for girls.

Job Opportunities for *BOYS*

FIELD:	**Excellent**	**Good**	**Average**	**Not good**	**Poor**	**I don t know**
SAMPLE: Printing Trades			✓			
Automotive Services						
Cosmetology						
Construction Trades						
Data Processing						
Electronics						
Machine & Metal Industries						
Drafting						
Home Economics						

Job Opportunities for *GIRLS*

FIELD	**Excellent**	**Good**	**Average**	**Not good**	**Poor**	**I don't know**
SAMPLE: Printing Trades			✓			
Automotive Services						
Cosmetology						
Construction Trades						
Data Processing						
Electronics						
Machine & Metal industries						
Drafting						
Home Economics						

11. **Are you aware of practices (administrative, teaching, or counseling) in your school district which discourage boys or girls from taking certain courses because of the sex of the student?** Circle the numbers of all those which apply.
    1. Negative comments and/or jokes by school personnel about students based on gender.
    2. Use of predominately male or female pronouns in literature about occupational education courses.
    3. Use of predominately males or females in pictures in occupational education promotional literature.
    4. Lack of acceptance on the part of some faculty of the fact that females as well as males need career education courses.
    5. Lack of encouragement for males to take home economics courses.
    6. Negative comments about Title IX legislation and its impact.
    7. Little or no active encouragement for students interested in courses in which there are few students of their sex.
    8. No administrative plan and/or encouragement for altering present practices.
    9. Lack of parental support for change.
    10. Others ____________________

____

____

12. **Have you participated in any sex-equity programs or workshops?**

Yes _____ No _____

If you have done so, please identify the program or workshops.

____

____

____

Thank you very much for completing this survey.

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Student Survey

Dear Student:

Your class has been chosen to take part in an important survey. Please answer the questions and then return the survey to your teacher.

We have also prepared surveys for your parents to answer. Please take their surveys—one for each parent—home with you after school today. Ask each of your parents to complete one of the surveys. If you don't live with your parents, please ask the adults you live with to answer the survey. Return your parents' surveys to your teacher within two days.

Thank you very much for helping us.

Sincerely,

Mary D. Ott

Mary D. Ott

Section 1

1. **Check one:** Male _____ Female _____
2. **Circle one:** Grade 9 10 11 12 Other
3. **Home school:** ____
4. **I am a (an)** __________________. (Circle one number. You may omit this question if you want to.)
    1. American Indian, Native American
    2. Asian or Asian-American
    3. Black, or Afro-American (Non-Hispanic)
    4. Hispanic, Spanish surname
    5. White, Caucasian (Non-Hispanic)
    6. Other
5. **The occupational education course or courses I am taking this year are**

    ____

6. **I started taking occupational education courses in** (circle one)

    Grade 9 10 11 12

7. **The other occupational education courses I took before my present course were** ____
8. **My first-choice occupational education course at the time I made the choice for this year was** ____
9. **How sure were you that you wanted to take that course?** Circle one number.
    1. Very sure
    2. Fairly sure
    3. Fairly unsure
    4. Very unsure
10. **If you were not able to take your first-choice course, why was this the case?**

    ____

    ____

    ____

11. **How satisfied are you with the occupational education course(s) you are now taking?** Circle one number.
    1. Completely satisfied
    2. Fairly satisfied
    3. Fairly dissatisfied
    4. Completely dissatisfied

12. Why did you select the occupational education course you are now taking? You may circle more than one reason. Circle the numbers of *all* the reasons that were true for you.

1. The course was recommended by people who had taken it.
2. A counselor convinced me to take it.
3. I know people who work in the field.
4. There was no other interesting course open.
5. I wanted to try out this field.
6. I needed the credits.
7. The course sounded interesting.
8. I wanted a course that met at the time of day that this one is scheduled.
9. I am good at this kind of work.
10. I wanted to leave my home school.
11. I wanted to learn a skill and prepare for a job.
12. My parents convinced me to take it.
13. I thought I would like the work.
14. It's a good trade with a good income.
15. My friends were going to take the course.
16. There are jobs available in this field.
17. I want to work in my parents' business which is in this field.
18. I don't know.
19. Other (please explain) ______________________________

____

13. Which of the following people helped you decide on your choice of an occupational education course? Circle the numbers of all those who helped you decide.

1. No one
2. Home school counselor
3. Home school teacher
4. BOCES counselor
5. BOCES or occupational education teacher
6. Male friends
7. Female friends
8. Father
9. Stepfather
10. Mother
11. Stepmother
12. Brother
13. Sister
14. Other person (please explain) ______________________________

____

14. Which of the persons listed in Question 13 was the greatest influence in your decision about an occupational education course? Give the number of the person from Question 13 who was the most influential person ________ .

Questions 15 through 19 concern your choice of the occupational education course you are now taking. For each question,

Put "1" if the person *supported* your choice.
Put "2" if the person *neither supported nor opposed* your choice.
Put "3" if the person *opposed* your choice.
Put "4" if you *don't know* how the person felt.

15. **How did your mother or female guardian feel about your occupational education course when you selected it?** _______

16. **How did your father or male guardian feel about your occupational education course when you selected it?** _______

17. **How did your home school guidance counselor feel about your occupational education course when you selected it?** _______

18. **How did your closest male friends feel about your occupational education course when you selected it?** _______

19. **How did your closest female friends feel about your occupational education course when you selected it?** _______

20. **Did you ever think about taking an occupational education or home economics course where there were few students or no students of your sex?** (For girls, these are courses in fields such as automotive services, machine and metal industries, construction trades, electronics, and drafting. For boys, these are courses in fields such as cosmetology, secretarial work, and home economics.) Circle the number.
    1. Yes
    2. No

21. **If you considered taking a course in which there are few students or no students of your sex, what course is it?**

    ____

    21a. If you considered taking a course in which there are few students or no students of your sex, did anyone encourage you to take that course? Circle the numbers of *all* those who encouraged you to take it.
    1. No one
    2. Home school counselor
    3. Home school teacher
    4. BOCES counselor
    5. BOCES or occupational teacher
    6. Male friends
    7. Female friends
    8. Father
    9. Stepfather
    10. Mother
    11. Stepmother
    12. Brother
    13. Sister
    14. Other person (please explain) ____________________

    21b. If you considered taking a course in which there are few students or no students of your sex, did anyone discourage you from taking that course? Circle the numbers of *all* those who discouraged you from taking it.
    1. No one
    2. Home school counselor
    3. Home school teacher
    4. BOCES counselor
    5. BOCES or occupational teacher
    6. Male friends
    7. Female friends
    8. Father
    9. Stepfather
    10. Mother
    11. Stepmother
    12. Brother
    13. Sister
    14. Other person (please explain) ____________________

22. Check the reaction you would have got from your father or male guardian if you had enrolled in the following programs. (Make one check mark for each program listed.)

PROGRAM	He would have supported it	He would have neither supported nor opposed it	He would have opposed it	I don't know
SAMPLE: Printing Trades		✓		
Automotive Services				
Cosmetology				
Construction Trades				
Data Processing				
Electronics				
Machine & Metal Industries				
Drafting				
Home Economics				

23. Check the reaction you would have got from your mother or female guardian if you had enrolled in the following programs. (Make one check mark for each program listed.)

PROGRAM	She would have supported it	She would have neither supported nor opposed it	She would have opposed it	I don't know
SAMPLE: Printing Trades		✓		
Automotive Services				
Cosmetology				
Construction Trades				
Data Processing				
Electronics				
Machine & Metal Industries				
Drafting				
Home Economics				

24. **Check the reaction you would have got from your home school guidance counselor if you had enrolled in the following programs.** (Make one check mark for each program listed.)

PROGRAM	**He/She would have supported it**	**He/She would have neither supported nor opposed it**	**He/She would have opposed it**	**I don't know**
SAMPLE: Printing Trades		✓		
Automotive Services				
Cosmetology				
Construction Trades				
Data Processing				
Electronics				
Machine & Metal Industries				
Drafting				
Home Economics				

25. **Check the reaction you would have got from your male friends if you had enrolled in the following programs.** (Make one check mark for each program listed.)

PROGRAM	**They would have supported it**	**They would have neither supported nor opposed it**	**They would have opposed it**	**I don't know**
SAMPLE: Printing Trades		✓		
Automotive Services				
Cosmetology				
Construction Trades				
Data Processing				
Electronics				
Machine & Metal Industries				
Drafting				
Home Economics				

26. **Check the reaction you would have got from your female friends if you had enrolled in the following programs.** (Make one check mark for each program listed.)

PROGRAM	**They would have supported it**	**They would have neither supported nor opposed it**	**They would have opposed it**	**I don't know**
SAMPLE: Printing Trades		✓		
Automotive Services				
Cosmetology				
Construction Trades				
Data Processing				
Electronics				
Machine & Metal Industries				
Drafting				
Home Economics				

Section 4

27. **Do you currently have a job outside school?** Yes ______ No ______
Which of the following statements best describes your current work responsibilities? Circle *one* number.
   1. A regular full-time job for pay.
   2. A regular part-time job for pay.
   3. Occasional jobs for pay.
   4. Volunteer work.
   5. Chores at home.
   6. No current work responsibilities.
   7. Other (please explain) ______________________________

28. **When you have completed your occupational education courses, how good do you think your job opportunities will be in this field in your local area?** Circle *one* number.
   1. Excellent
   2. Good
   3. Average
   4. Not good
   5. Poor
   6. I don't know

29. If you have not yet graduated from high school, what do you plan to do during the year after you graduate from high school? Circle the numbers of *up to three* choices.

1. Work full-time in my occupational education field.
2. Work full-time, not in my occupational education field.
3. Work part-time in my occupational education field.
4. Work part-time, not in my occupational education field.
5. Join the armed services.
6. Enter a training or apprentice program.
7. Go to a technical school.
8. Go to a two-year college.
9. Go to a four-year college.
10. Get married.
11. I don't know.
12. Other (please explain) ____________________

30. What would you like to be doing five years after you graduate from high school? Circle the numbers of up to *three* choices.

1. Working full-time in my occupational education field.
2. Working full-time, not in my occupational education field.
3. Working part-time in my occupational education field.
4. Working part-time, not in my occupational education field.
5. In the armed services.
6. In a training or apprentice program.
7. In a technical school.
8. In a two-year college program, or a graduate of a two-year college.
9. In a four-year college program, or a graduate of a four-year college.
10. Married.
11. I don't know.
12. Other (please explain) ____________________

31. With whom do you live? Circle *one* number.

1. Mother and father
2. Mother and stepfather
3. Stepmother and father
4. Mother only
5. Father only
6. Other (please explain) ____________________

32. What type of employment does your father (or male guardian) usually have? (For example, salesperson, teacher, cook, bank teller, etc.)

____

33. What type of employment does your mother (or female guardian) usually have? (For example, salesperson, teacher, cook bank teller, etc.)

____

34. How do you think you would feel if there were an equal number of boys and of girls in your occupational education course? Circle *one* number.

1. I would not like it.
2. It would not matter to me.
3. I would like it.
4. That's the way it is now and I don't like it.
5. That's the way it is now and it doesn't matter to me.
6. That's the way it is now and I like it.
7. I don't know.
8. Other (please explain) ____________________

____

Thank you very much for completing this survey.

The New York State College of Agriculture and Life Sciences, a Statutory College of the State University at Cornell University, Ithaca, NY 14853.

Office use only

Cornell Institute for Occupational Education
Department of Education
Stone Hall
Ithaca, N.Y. 14853
Telephone 607-256-6515

Parent Survey

The Cornell Institute for Occupational Education and the Office of Special Programs in Occupational Education of the New York State Education Department are conducting a study of student choice of courses in occupational education and home economics. Occupational education courses include: automotive services, cosmetology, construction trades, data processing, electronics, machine and metal industries, secretarial, and agricultural courses, and many others. As a parent or guardian, your response to this survey will be essential to our study. The responsibility for these questions rests with the Cornell Institute for Occupational Education and the questions do not necessarily reflect local school policies or staff opinions. We appreciate your viewpoints and thank you for your cooperation in filling out this brief form.

1. **Please indicate your relationship to the student who gave you the survey.** Circle one number.
   1. Father
   2. Stepfather
   3. Mother
   4. Stepmother
   5. Other (please specify) ____________________

2. **What is the sex of the student who gave you this survey?** Circle one number.
   1. Male
   2. Female

3. **How did you feel about the occupational education course your child chose, when he/she selected it?** Circle one number.
   1. I supported the choice.
   2. I neither supported nor opposed the choice.
   3. I opposed the choice.
   4. I was not informed of the choice.

4. **How do you feel about your child's occupational education course at the present time?** Circle one number.
   1. It was a good choice.
   2. I am not sure whether or not it was a good choice.
   3. It was not a good choice.

5. **How would you have reacted if your child had decided to enroll in each of the following programs?** (Check your reaction to each program listed.)

PROGRAM	**Would have supported it**	**Would neither have supported nor opposed it**	**Would have opposed it**	**I don't know**
SAMPLE: Printing Trades		✓		
Automotive Services				
Cosmetology				
Construction Trades				
Data Processing				
Electronics				
Machine & Metal Industries				
Drafting				
Home Economics				

6. **When your child completes his/her occupational education courses, how good do you think his/her job opportunities will be in this field in your local area?** Circle one number.
   1. Excellent
   2. Good
   3. Average
   4. Not good
   5. Poor
   6. I don't know

7. What would you like your child to do during the year after he/she graduates from high school? Circle the numbers of up to *three* choices.

1. Work full-time in his/her occupational education field.
2. Work full-time, not in his/her occupational education field.
3. Work part-time in his/her occupational education field.
4. Work part-time, not in his/her occupational education field.
5. Join the armed services.
6. Enter a training or apprentice program.
7. Go to a technical school.
8. Go to a two-year college.
9. Go to a four-year college.
10. Get married.
11. I don't know.
12. Other (please explain) ____________________

8. What would you like your child to be doing five years after graduation from high school? Circle the numbers of up to *three* choices.

1. Working full-time in his/her occupational education field.
2. Working full-time, not in his/her occupational education field.
3. Working part-time in his/her occupational education field.
4. Working part-time, not in his/her occupational education field.
5. In the armed services.
6. In a training or apprentice program.
7. In a technical school, or a graduate of a technical school.
8. In a two-year college, or a graduate of a two-year college.
9. In a four-year college, or a graduate of a four-year college.
10. Married.
11. I don't know.
12. Other (please explain) ____________________

Thank you very much for completing this survey. Please give your completed survey to your child to return to his or her teacher.

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Teacher Survey

Your name (optional) ______________________________

1. **What is your sex?** Circle one number.
   1. Male
   2. Female

2. **For each of your classes that is completing student surveys, please indicate the course name, the number of male students, and the number of female students.**
   1. Course name ______________________________
      Number of male students _______
      Number of female students _______
   2. Course name ______________________________
      Number of male students _______
      Number of female students _______
   3. Course name ______________________________
      Number of male students _______
      Number of female students _______

3. **What might be done to increase the enrollment of girls in programs such as construction and maintenance, drafting, and electronics?**

4. **What might be done to increase the enrollment of boys in programs such as personal services (cosmetology, barbering) and in home economics?**

5. **Do you think girls should be encouraged to take courses in the field which you teach?** Circle one number.
   1. Yes
   2. No
   3. I don't know

6. **Do you think boys should be encouraged to take courses in the field which you teach?** Circle one number.
   1. Yes
   2. No
   3. I don't know

7. **If a boy completed your course or courses, how good would his job opportunities be in this field in your local area?** Circle one number.
   1. Excellent
   2. Good
   3. Average
   4. Not good
   5. Poor
   6. I don't know

8. **If a girl completed your course or courses, how good would her job opportunities be in this field in your local area?** Circle one number.
   1. Excellent
   2. Good
   3. Average
   4. Not good
   5. Poor
   6. I don't know

9. **What is being done in your school district to increase the enrollment of girls in programs such as construction and maintenance trades, drafting, and electronics and of boys in programs such as personal services (cosmetology, barbering) and in home economics?** Circle the numbers of all those which apply.
   1. Counselors have access to career materials and employment data that demonstrate the importance of careers to female students.
   2. Counselors make available to students career materials which are not sex stereotyped (in use of *he* and *she*, or pictures presenting members of only one sex performing a job).
   3. Counselors are familiar with Title IX legislation.
   4. Teachers and counselors are encouraged to attend workshops which focus on sexism in education.
   5. Information about area vocational schools and available programs reach *all* prospective students.
   6. There are vocational teachers of the nontraditional sex.
   7. There is a flexible program which facilitates exploration of a number of vocational options.
   8. There is active deliberate recruitment of the nontraditional sex in enrollment recruiting.
   9. There is an attempt to familiarize parents with the broad spectrum of occupations which are available to all students.
   10. Other ______________________________
   ____

10. **Are you aware of practices (administrative, teaching, or counseling) in your school district which discourage boys or girls from taking certain courses because of the sex of the student?** Circle the numbers of all those which apply.
    1. Negative comments and/or jokes by school personnel about students based on gender.
    2. Use of predominantly male or female pronouns in literature about occupational education courses.
    3. Use of predominantly males or females in pictures in occupational education promotional literature.
    4. Lack of acceptance on the part of some faculty for the fact that females as well as males need career education courses.
    5. Lack of encouragement for males to take home economics courses.
    6. Negative comments about Title IX legislation and its impact.
    7. Little or no active encouragement for students interested in courses in which there are few students of their sex.
    8. No administrative plan and/or encouragement for altering present practices.
    9. Lack of parental support for change.
    10. Others ______________________________
    ____
    ____

11. What efforts have you made to increase enrollments of the underrepresented sex in your course(s)?

____

____

____

____

____

____

____

12. Have you participated in any sex-equity faculty development programs or workshops? Circle one number.

1. Yes
2. No

If "Yes", please identify the programs or workshops.

____

____

____

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Counselor Survey

Your name (optional) ____________________

1. **What is your sex?** Circle one number.
   1. Male
   2. Female
2. **Please indicate the approximate numbers of male students and of female students whom you counsel.**
   Number of male students ______
   Number of female students ______
3. **How are students recruited for occupational education programs at your school?** That is, who contacts students to tell them about programs at your school? ____________________
4. **How are students selected for occupational education programs at your school?** That is, if more students sign up for a course than can enroll, what criteria are used to choose students, and who makes the choices? ____________________
5. **What is your role, if any, in the recruitment and selection of students?** ____________________
6. **What is being done in your school district to increase the enrollment of girls in programs such as construction and maintenance trades, drafting, and electronics and of boys in programs such as personal services (cosmetology, barbering) and in home economics?** Circle the numbers of all those which apply.
   1. Counselors have access to career materials and employment data that demonstrate the importance of careers to female students.
   2. Counselors make available to students career materials which are not sex stereotyped (in use of *he* and *she*, or pictures presenting members of only one sex performing a job).
   3. Counselors are familiar with Title IX legislation.
   4. Teachers and counselors are encouraged to attend workshops which focus on sexism in education.
   5. Information about area vocational schools and available programs reach *all* prospective students.
   6. There are vocational teachers of the nontraditional sex.
   7. There is a flexible program which facilitates exploration of a number of vocational options.
   8. There is active deliberate recruitment of the nontraditional sex in enrollment recruiting.
   9. There is an attempt to familiarize parents with the broad spectrum of occupations which are available to all students.
   10. Other ____________________

7. **What additional efforts are being planned in your school district to increase the enrollment of girls in programs such as construction and maintenance trades, drafting and electronics and of boys in programs such as personal services and home economics?** Circle the numbers of all those which apply.
   1. Counselors will have access to career materials and employment data that demonstrate the importance of careers to female students.
   2. Counselors will make available to students career materials which are not sex stereotyped (in use of *he* and *she*, or pictures presenting members of only one sex performing a job).
   3. Counselors will become familiar with Title IX legislation.
   4. Teachers and counselors will be encouraged to attend workshops which focus on sexism in education.
   5. Information about area vocational schools and available programs will reach *all* prospective students.
   6. There will be vocational teachers of the nontraditional sex.
   7. There will be a flexible program which facilitates exploration of a number of vocational options.
   8. There will be active deliberate recruitment of the nontraditional sex in enrollment recruiting.
   9. There will be an attempt to familiarize parents with the broad spectrum of occupations which are available to all students.
   10. Other ____

       ____

8. **Do you think it is a good idea to encourage girls to take courses in construction and maintenance trades, drafting, and electronics, and other fields in which girls are less than 20% of the enrollment?** Yes _______ No _______

   Why or why not? ____

   ____

   ____

9. **Do you think it is a good idea to encourage boys to take courses in personal services and in home economics, and other fields in which boys are less than 20% of the enrollment?** Yes _______ No _______

   Why or why not? ____

   ____

   ____

10. **Please fill in the following charts to indicate your estimate of job opportunities in the fields listed in your local area for students who complete occupational education courses in these fields.** Check one response for each field in each chart. The first chart is for job opportunities for boys; the second chart is for job opportunities for girls.

Job Opportunities for BOYS

FIELD	Excellent	Good	Average	Not good	Poor	I don't know
SAMPLE: Printing Trades			✓			
Automotive Services						
Cosmetology						
Construction Trades						
Data Processing						
Electronics						
Machine & Metal Industries						
Drafting						
Home Economics						

Job Opportunities for GIRLS

FIELD	Excellent	Good	Average	Not good	Poor	I don't know
SAMPLE: Printing Trades			✓			
Automotive Services						
Cosmetology						
Construction Trades						
Data Processing						
Electronics						
Machine & Metal Industries						
Drafting						
Home Economics						

11. **Are you aware of practices (administrative, teaching, or counseling) in your school district which discourage boys or girls from taking certain courses because of the sex of the student?** Yes _______ No _______ If yes, circle the numbers of all those which apply.
    1. Negative comments and/or jokes by school personnel about students based on gender.
    2. Use of predominately male or female pronouns in literature about occupational education courses.
    3. Use of predominately males or females in pictures in occupational education promotional literature.
    4. Lack of acceptance on the part of some faculty for the fact that females as well as males need career education courses.
    5. Lack of encouragement for males to take home economics courses.
    6. Negative comments about Title IX legislation and its impact.
    7. Little or no active encouragement for students interested in courses in which there are few students of their sex.
    8. No administrative plan and/or encouragement for altering present practices.
    9. Lack of parental support for change.
    10. Others ______________________________

____

____

12. **Have you participated in any sex-equity programs or workshops?** Yes _______ No _______ **If you have done so, please identify the program or workshops.**

____

____

____

Thank you very much for completing this survey.

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